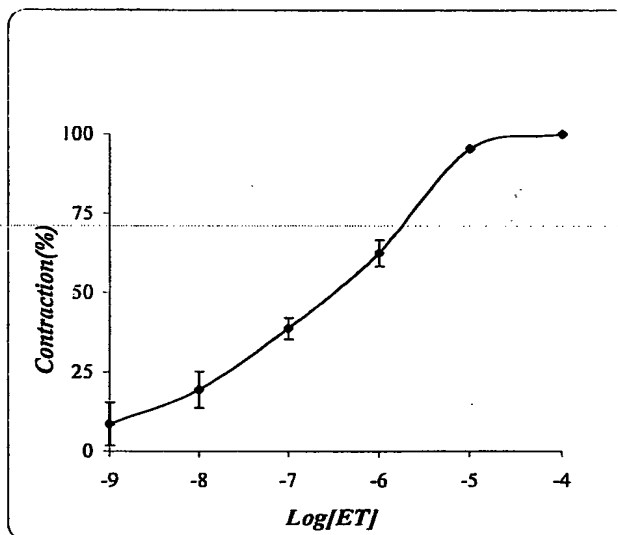
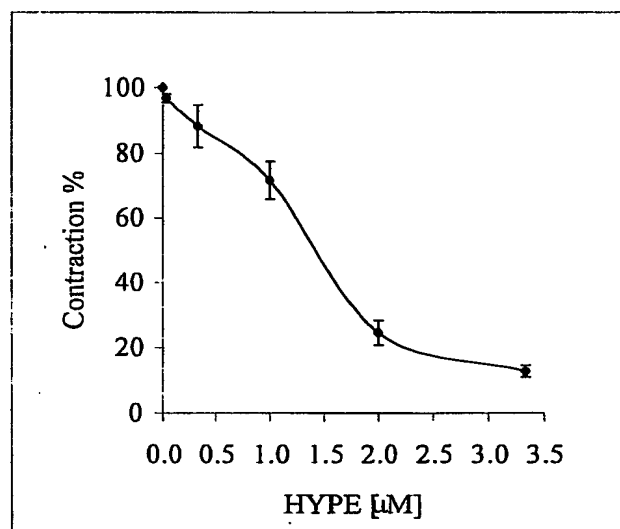


**Fig. 1.1: Inhibition of endothelin-1 (ET)-induced contraction of rat tracheal rings by Lipid-conjugates.**

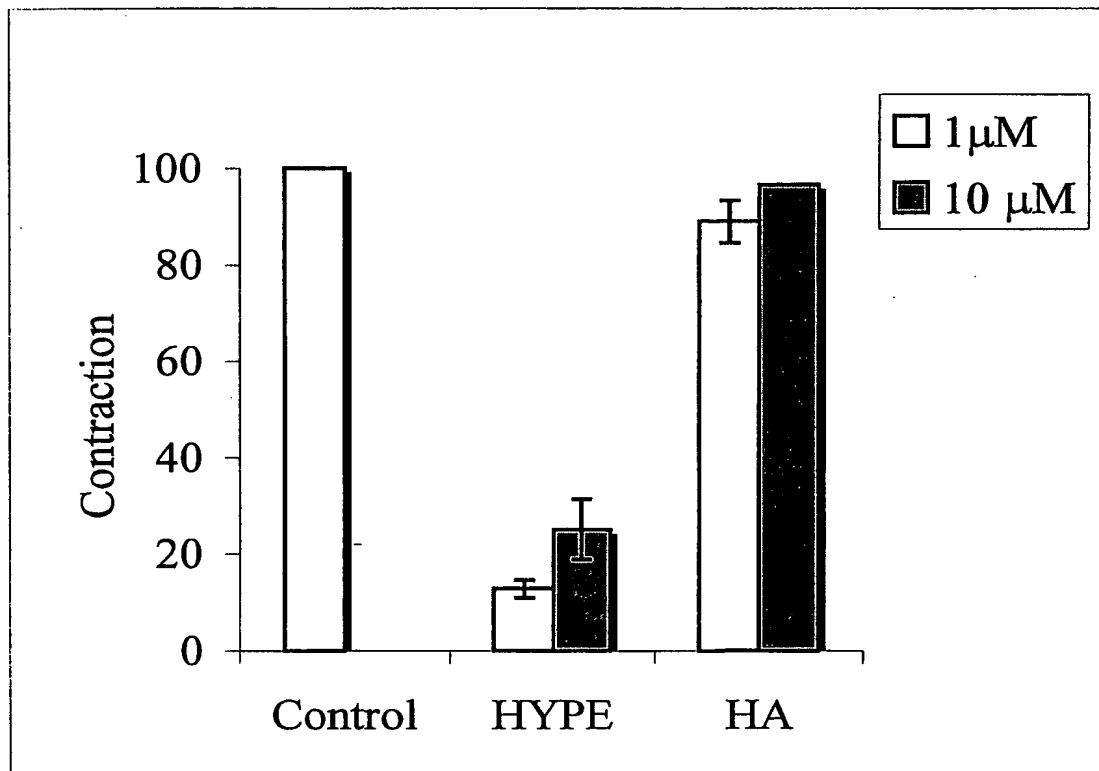
**A: Contraction of rat trachea by Endothelin-1.**



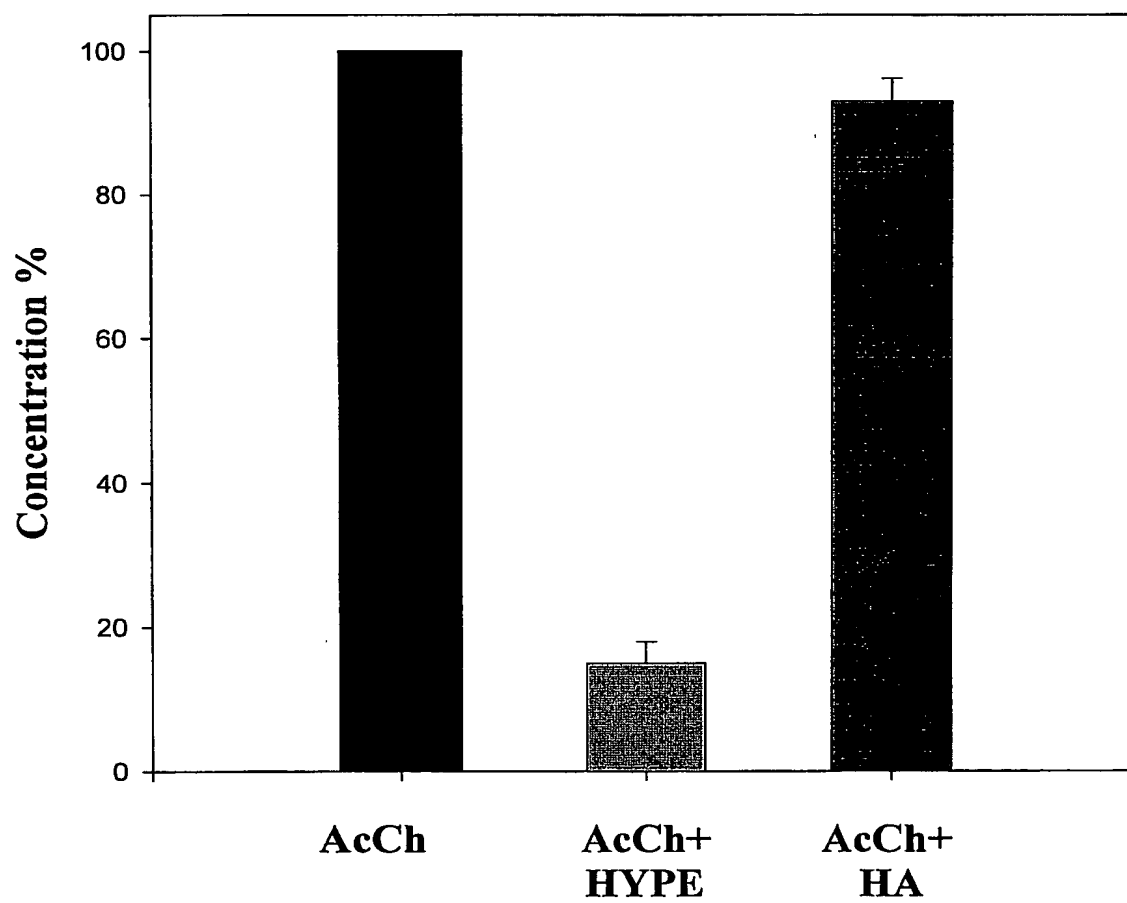
**B: Effect of HYPE on ET-induced contraction of rat trachea.**



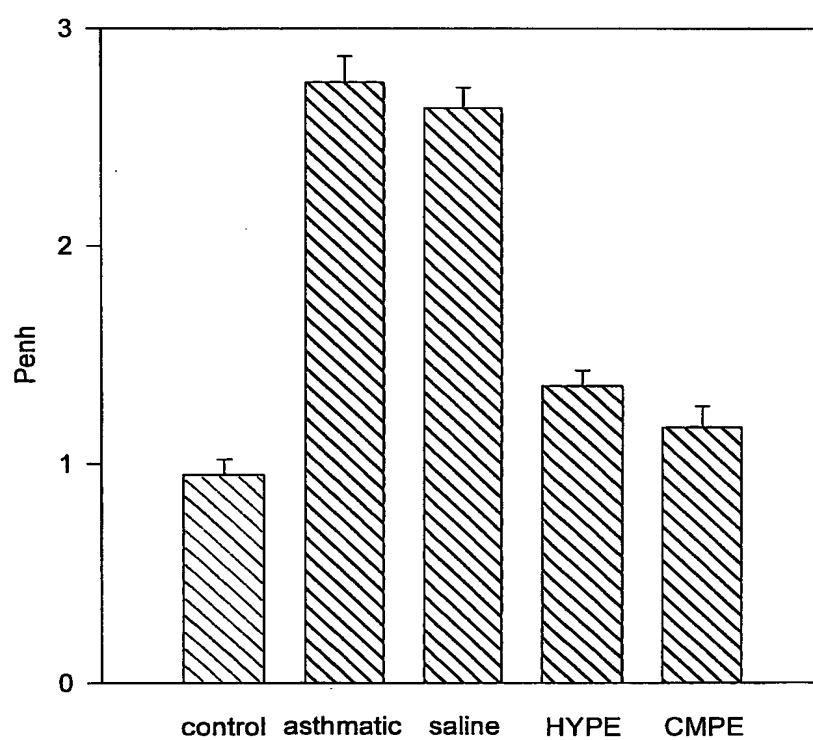
**Fig. 1.2: Effect of HYPE and Hyaluronic acid (HA) on ET-1-induced contraction of rat trachea.**



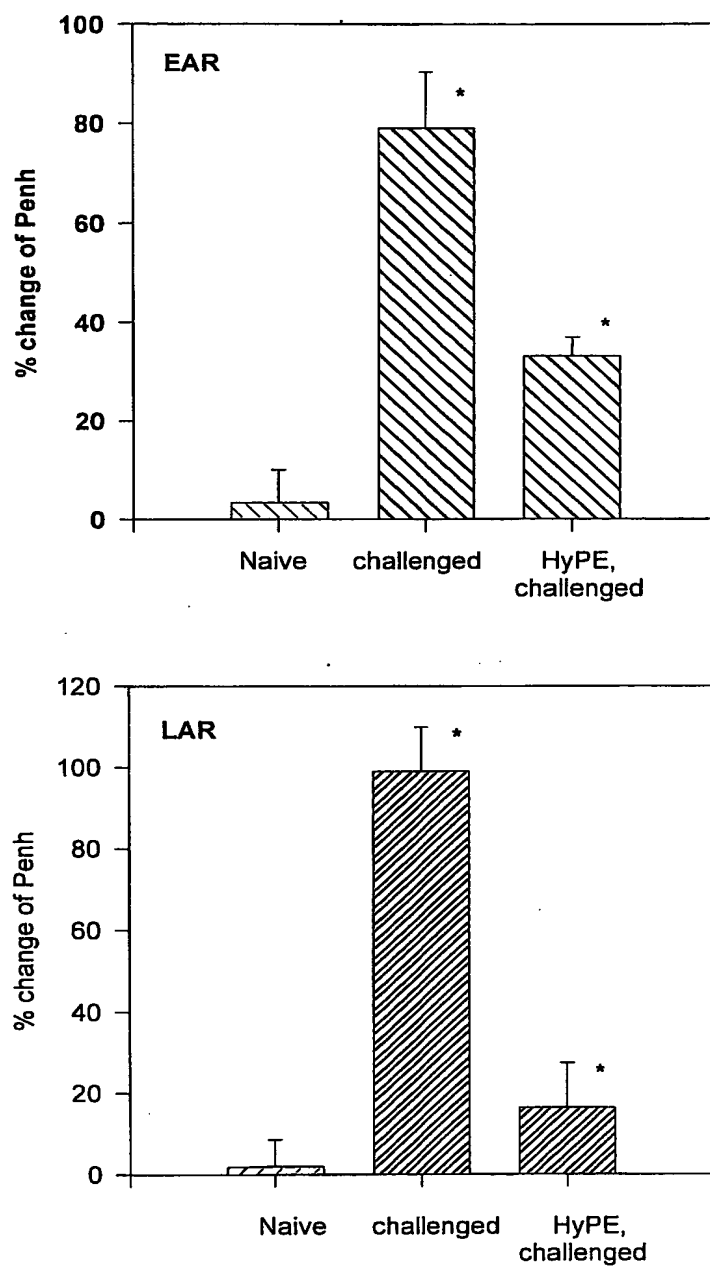
**Fig 1.3: Effect of HYPE and Hyaluronic acid (HA) on Acetylcholine (AcCh) – induced contraction of isolated rat trachea rings.**



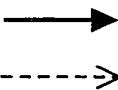
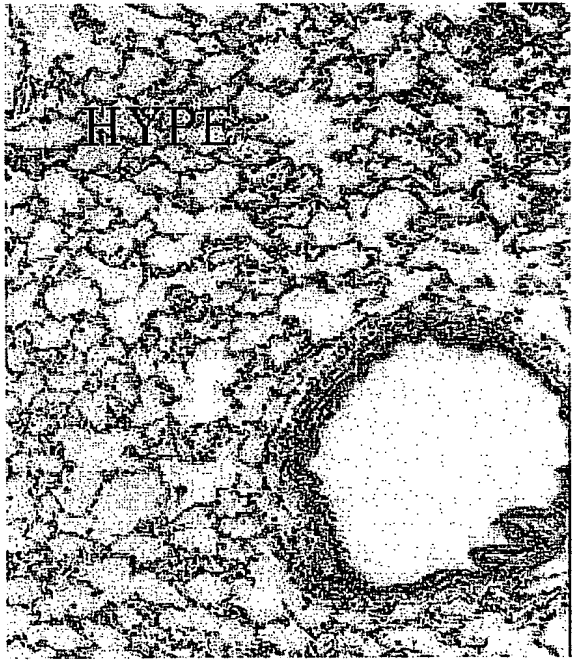
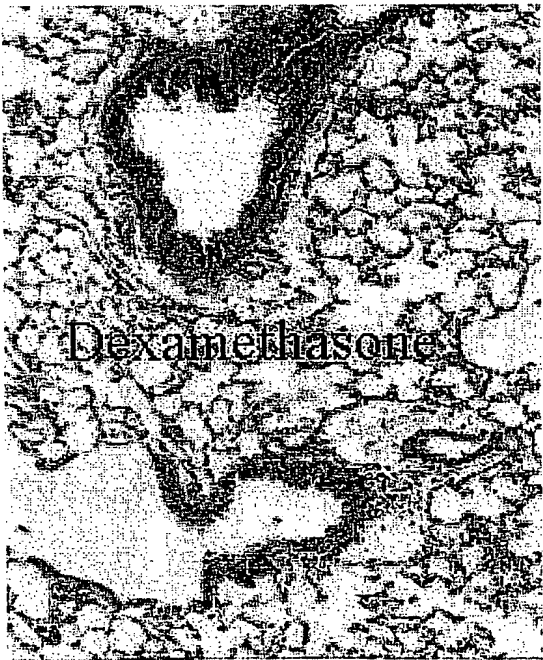
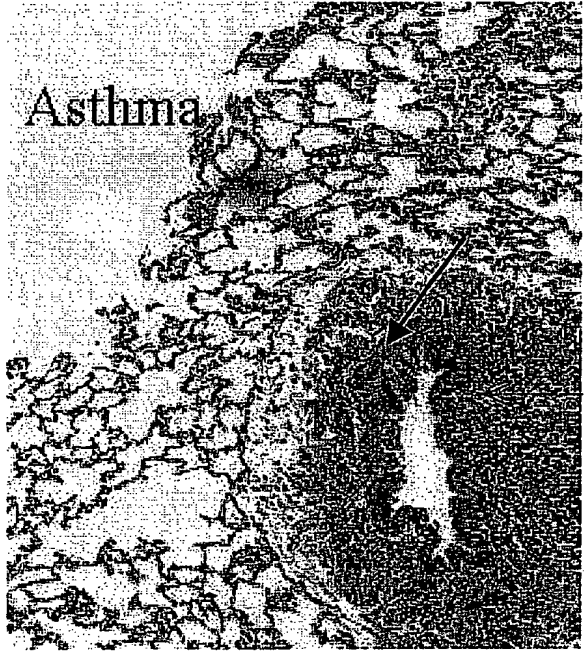
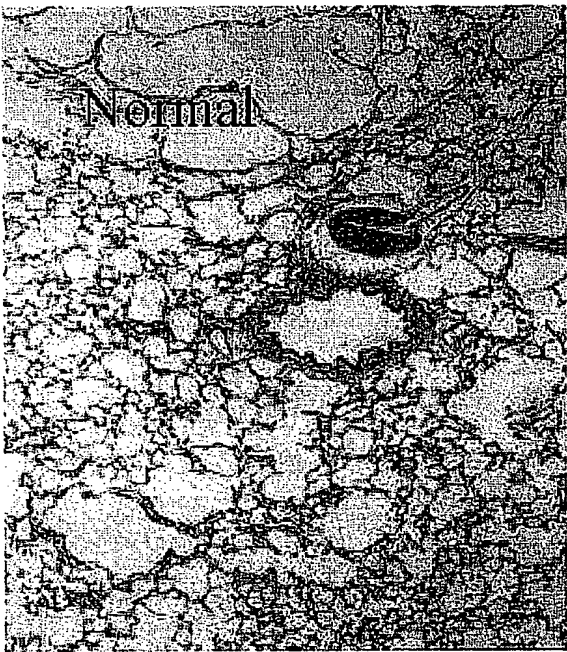
**Fig. 1.4: Lipid-conjugates ameliorate respiratory function in asthmatic rats.**



**Fig. 1.5: Amelioration of respiratory function in ovalbumin-challenged asthmatic rats by aerosolic administration of HyPE.**



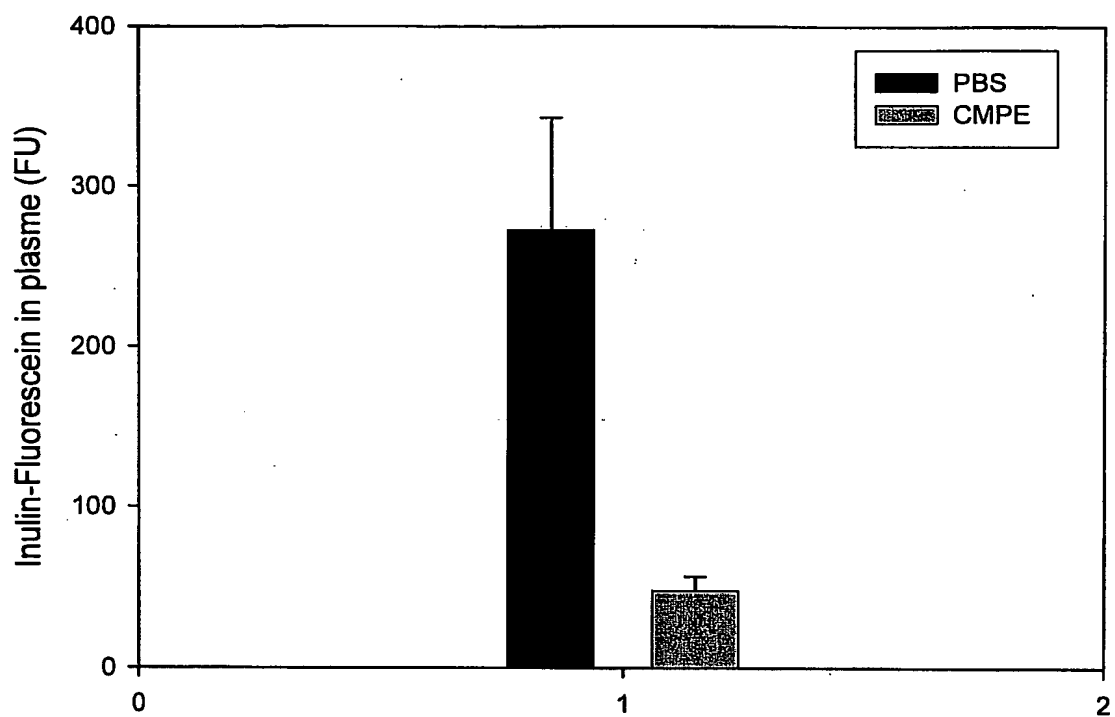
**Fig. 1.6: Amelioration of airway remodeling in ovalbumin-sensitized asthmatic rats by inhalation of HyPE (compared with systemic dexamethasone treatment).**



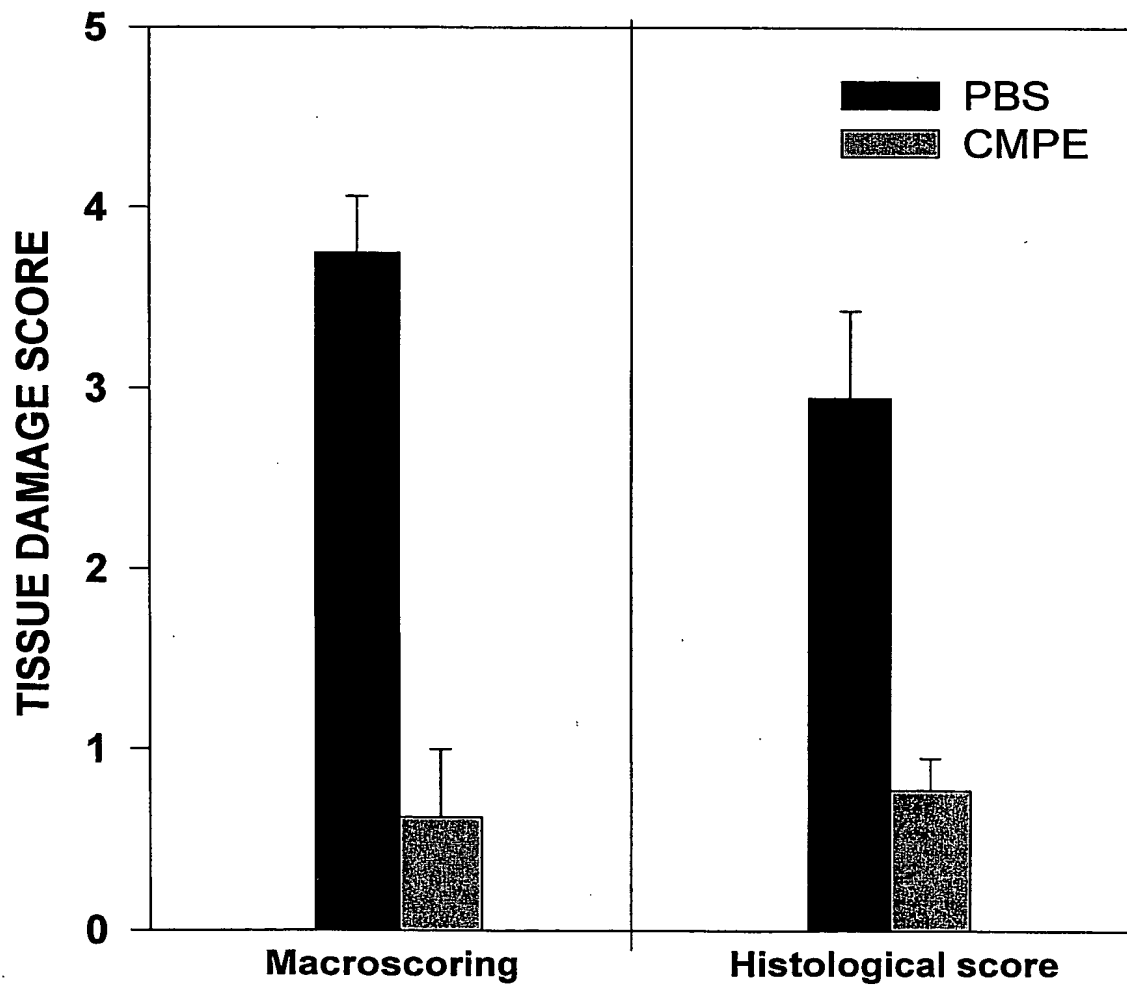
Thickening of airway smooth muscle

Infiltrate of inflammatory cells

**Fig. 2.1: Amelioration of intestinal permeation in rats with indomethacin – induced small intestinal injury by CMPE.**

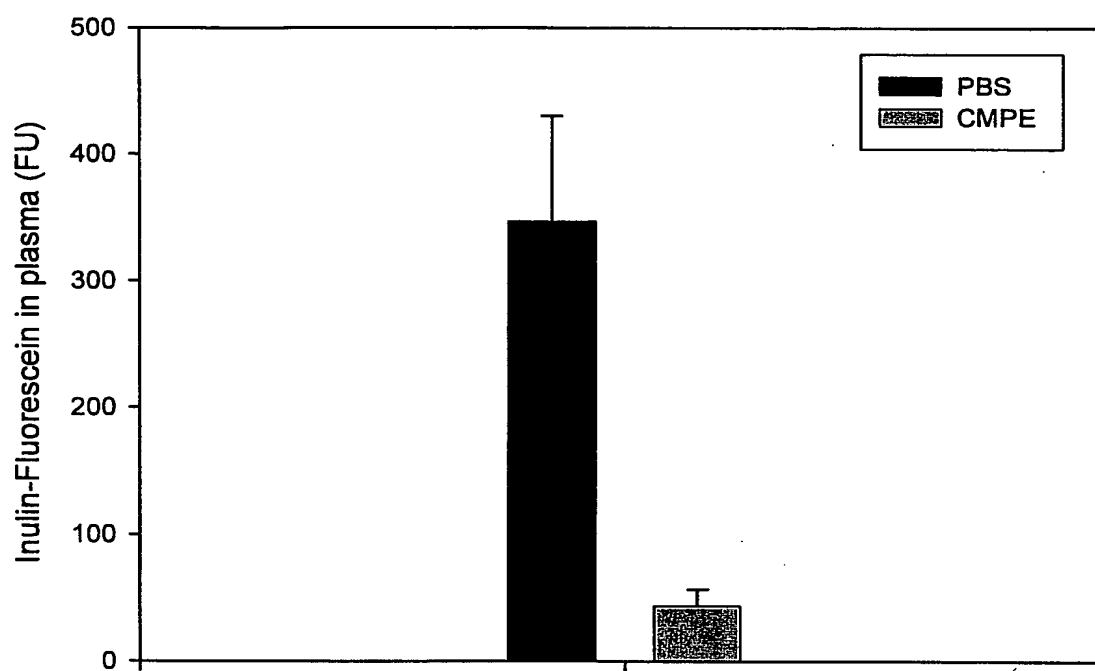


**Fig. 2.2: Amelioration of indomethacin-induced small intestinal damage by CMPE; macroscoring (left panel) and histological score (right panel).**

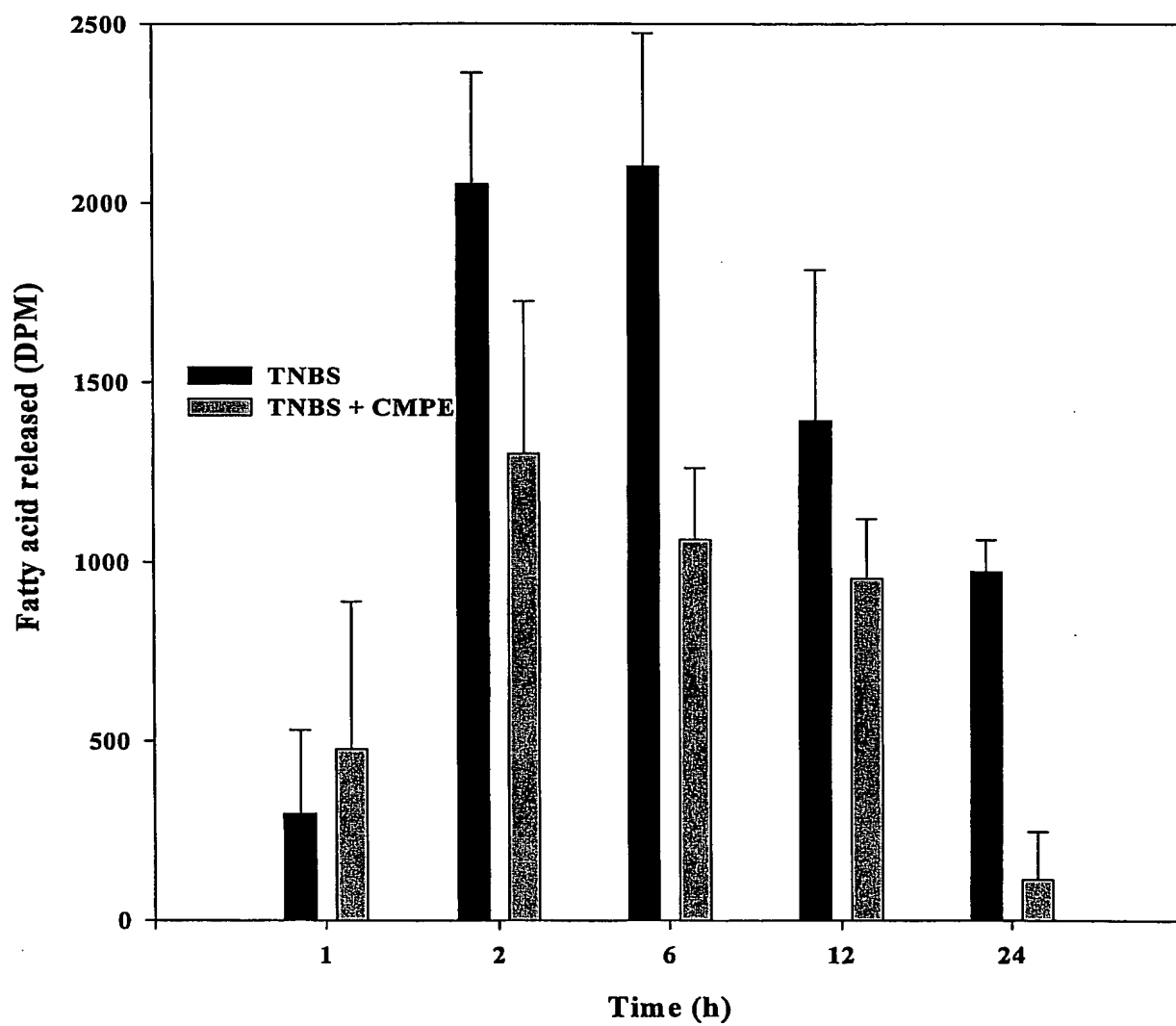




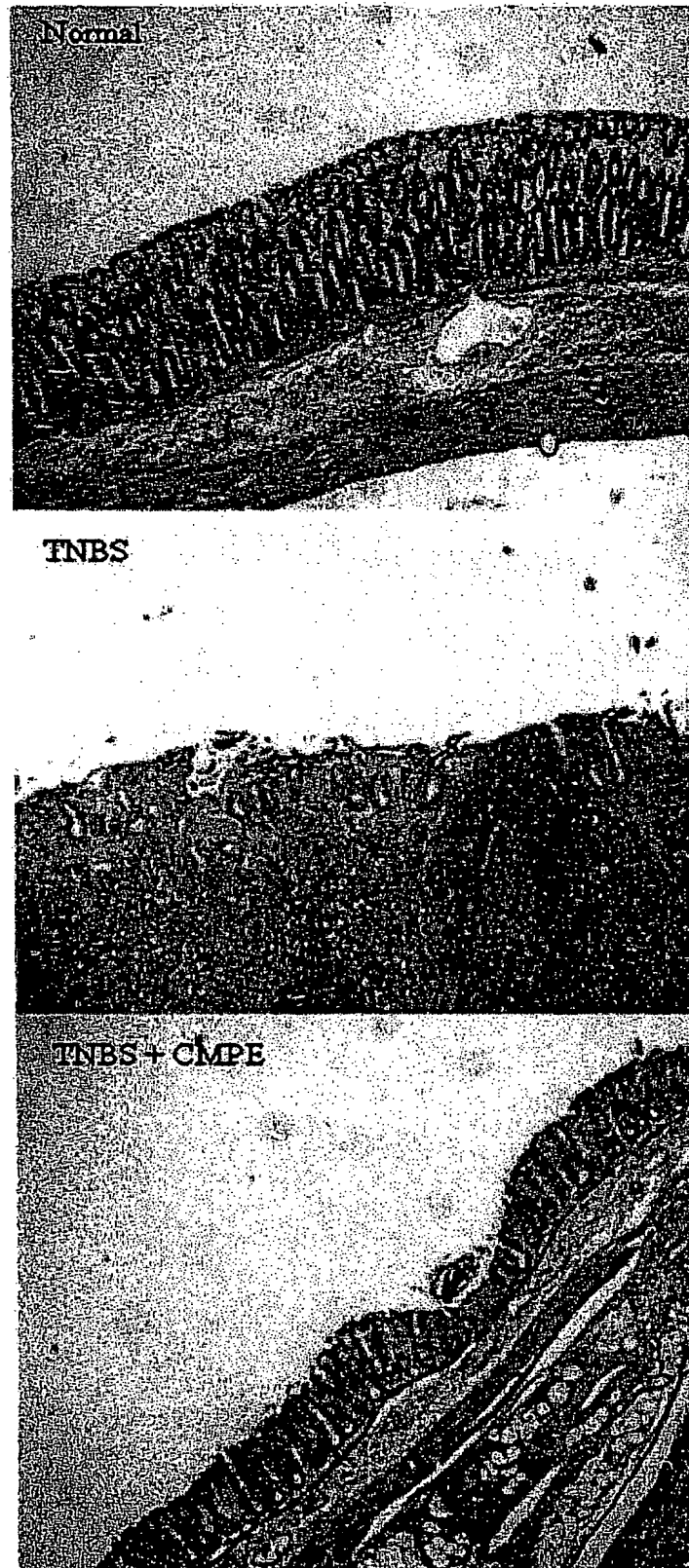
**Fig. 2.3: Amelioration of intestinal permeation in rats with TNBS – induced colitis by CMPE.**



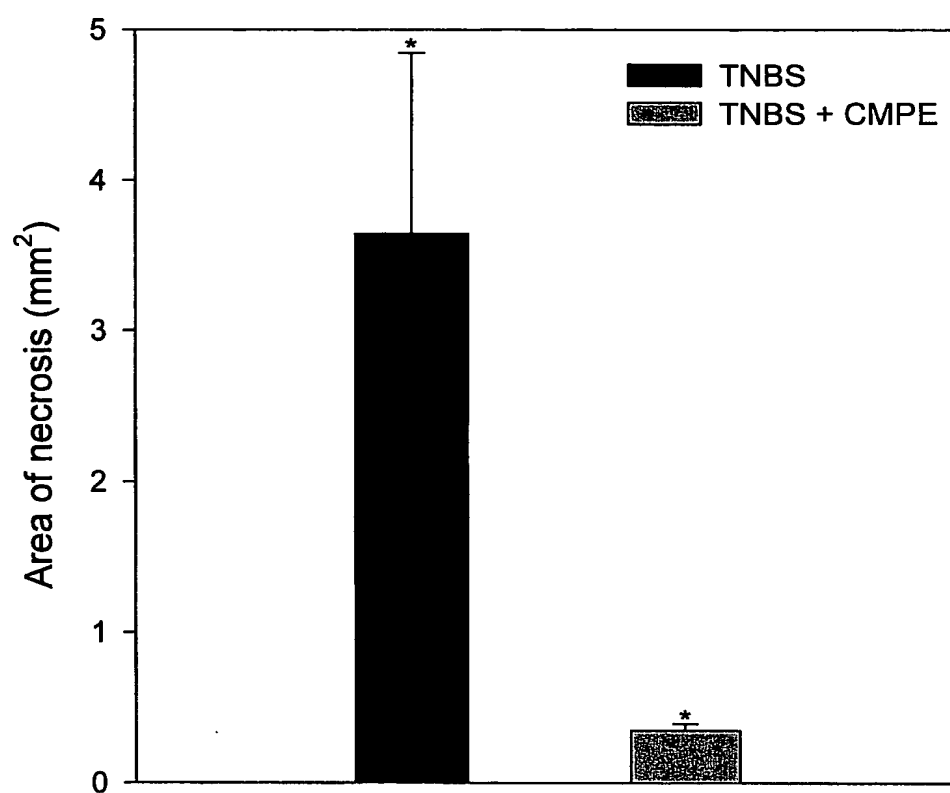
**Fig. 2.4: CMPE suppresses phospholipase A<sub>2</sub> (PLA<sub>2</sub>) activity in plasma of rats with TNBS-induced colitis**



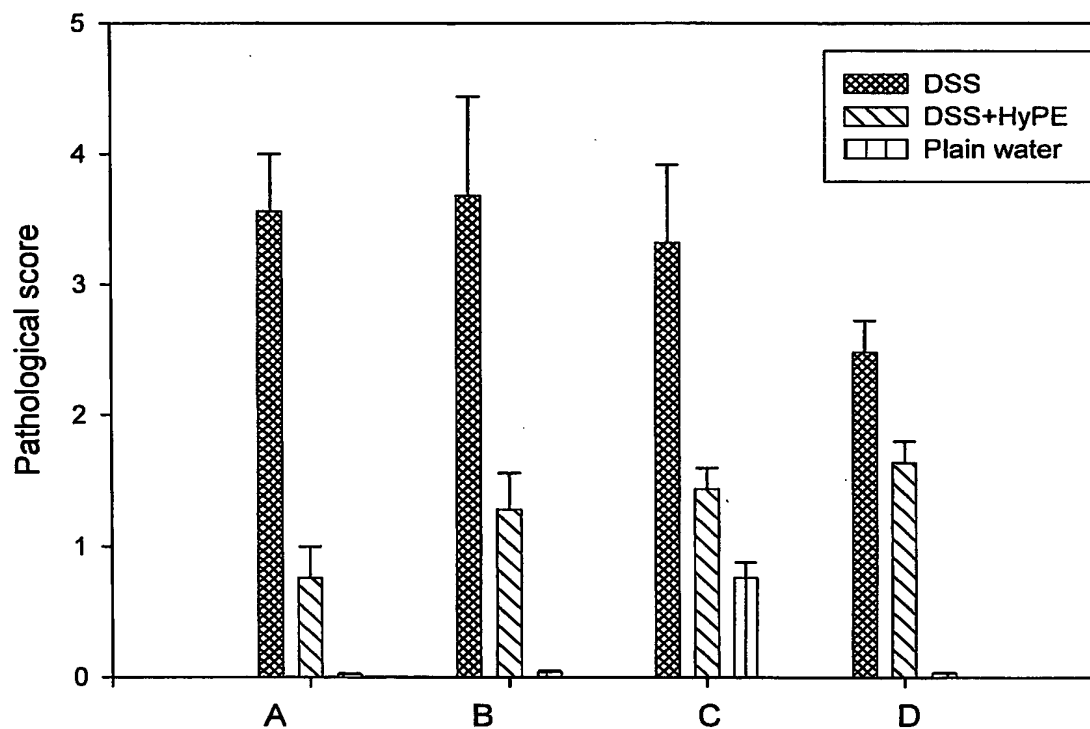
**Fig. 2.5: Amelioration of TNBS-induced colon damage by treatment with CMPE: Histology micrographs.**



**Fig. 2.6: Amelioration of TNBS-induced colon damage by treatment with CMPE: Histological morphometry.**

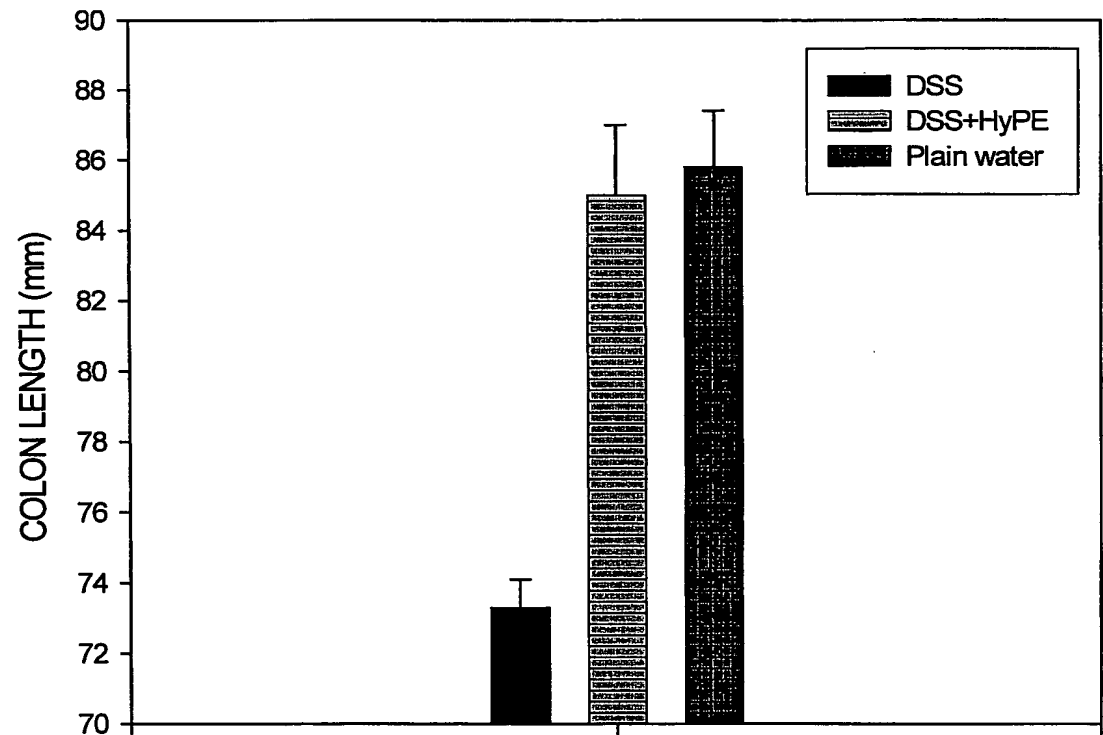


**Fig. 2.7: HyPE (administered orally) ameliorates dextran sulfate-induced colitis in mice. Pathological score.**



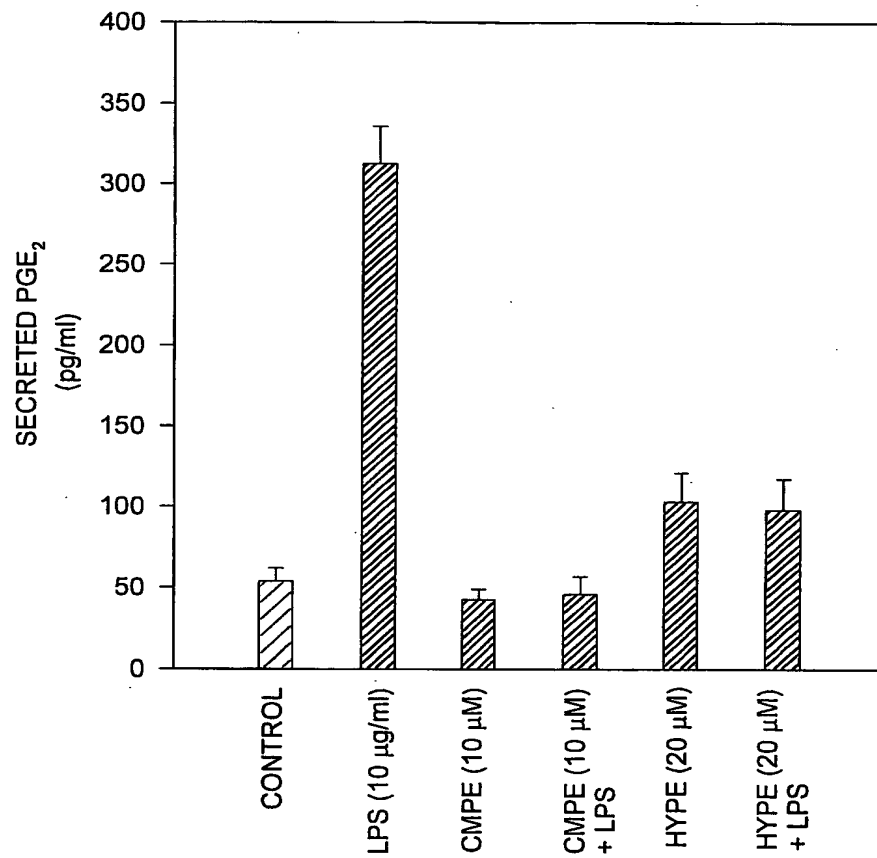
A – crypt score  
B – inflammation score  
C - lymph accumulation  
D – DAI = Disease activity index

**Fig. 2.8: HyPE (administered orally) abates colon shortening in mice with dextran sulfate-induced colitis.**

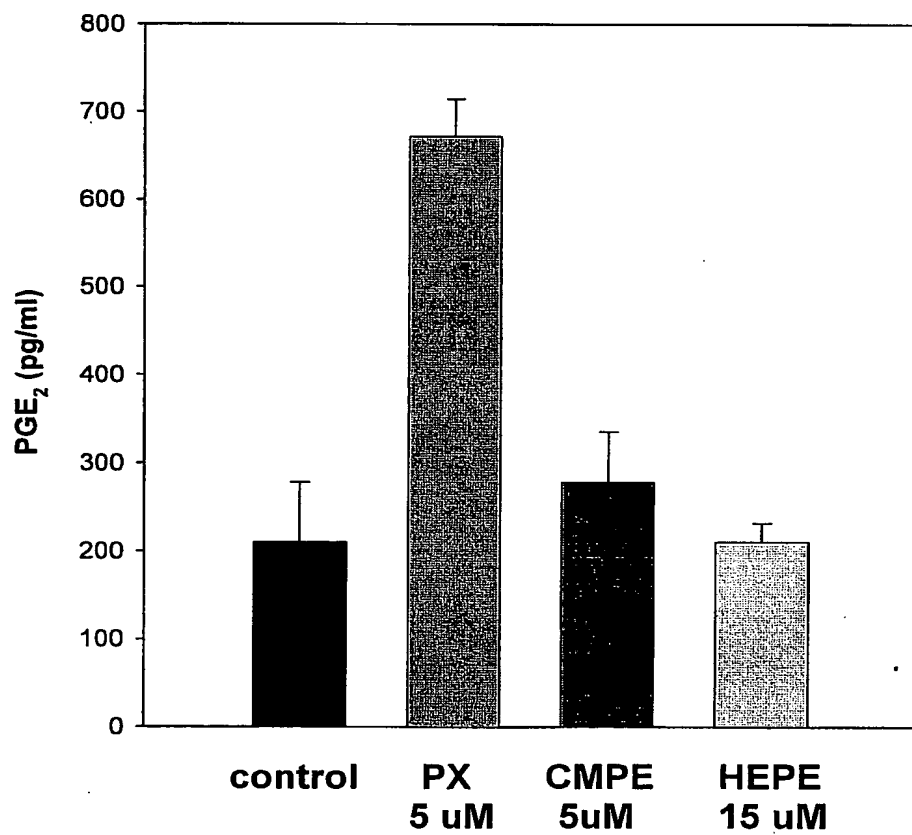


Each datum is Mean+SEM for 9 mice. \* $p \leq 0.001$ ; \*\* $p \leq 0.005$ ; \*\*\* $p \leq 0.001$ ; # not significant.

**Fig. 3.1: Lipid-conjugates inhibit the secretion of PGE<sub>2</sub> from glial cells stimulated by LPS.**

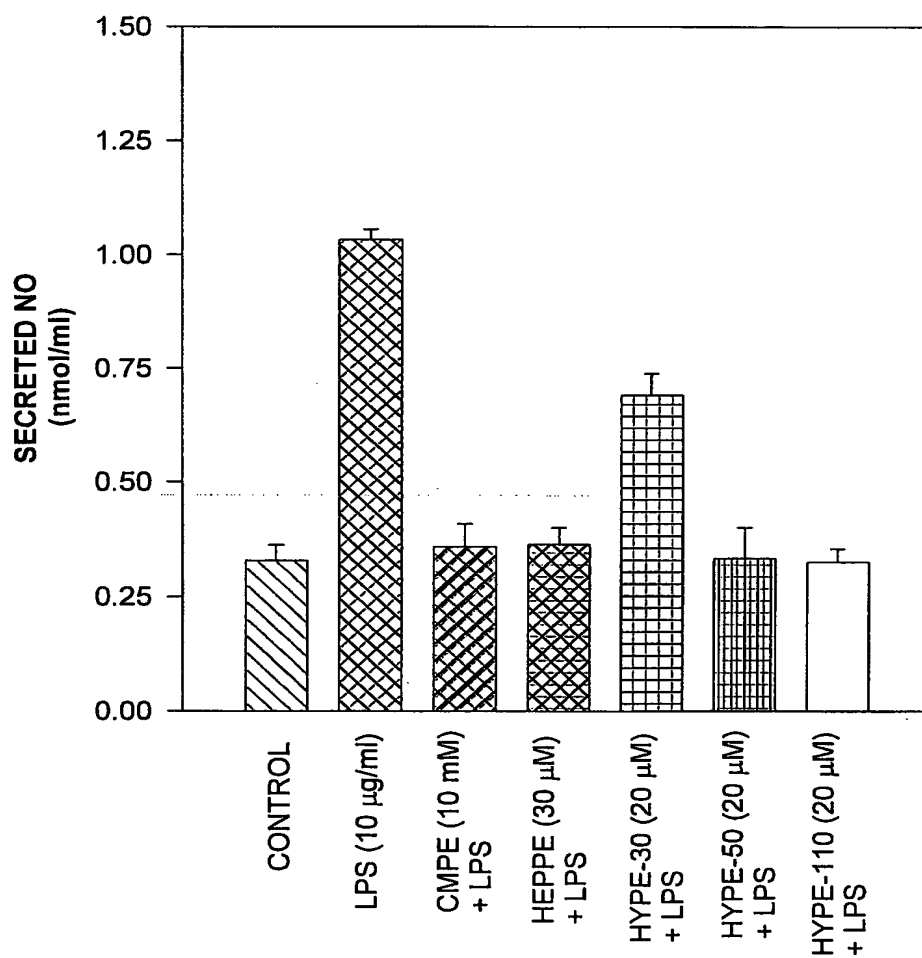


**Fig. 3.2: Lipid-conjugates inhibit the secretion of PGE<sub>2</sub> from glial cells stimulated by pardaxin (PX).**

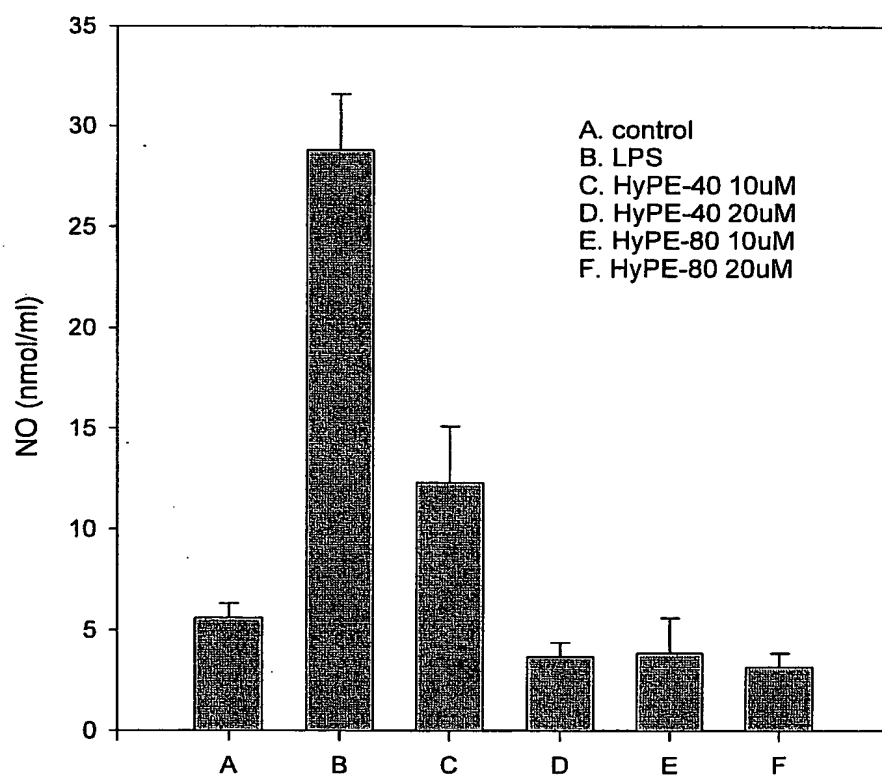




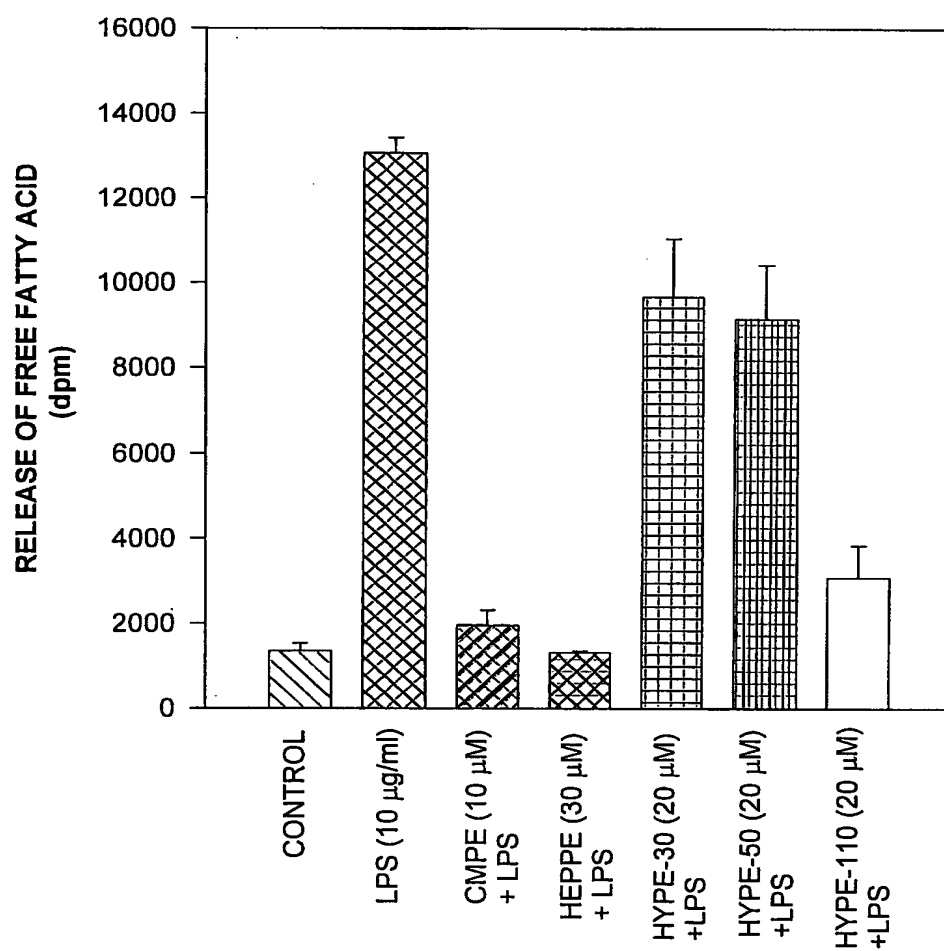
**Fig. 3.3: Lipid-conjugates inhibit the production of nitric oxide by LPS-stimulated rat glial cells.**



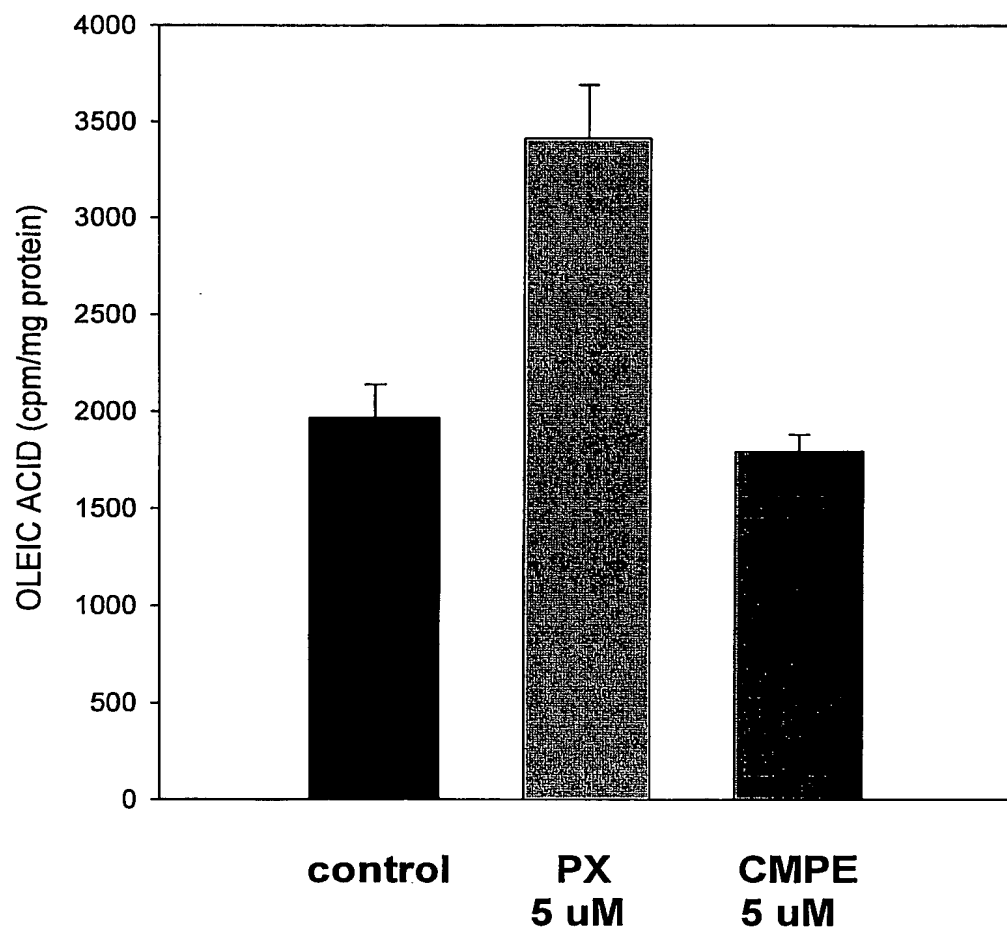
**Fig. 3.4: Lipid-conjugates inhibit the production of nitric oxide by PX-stimulated PC12 cells.**



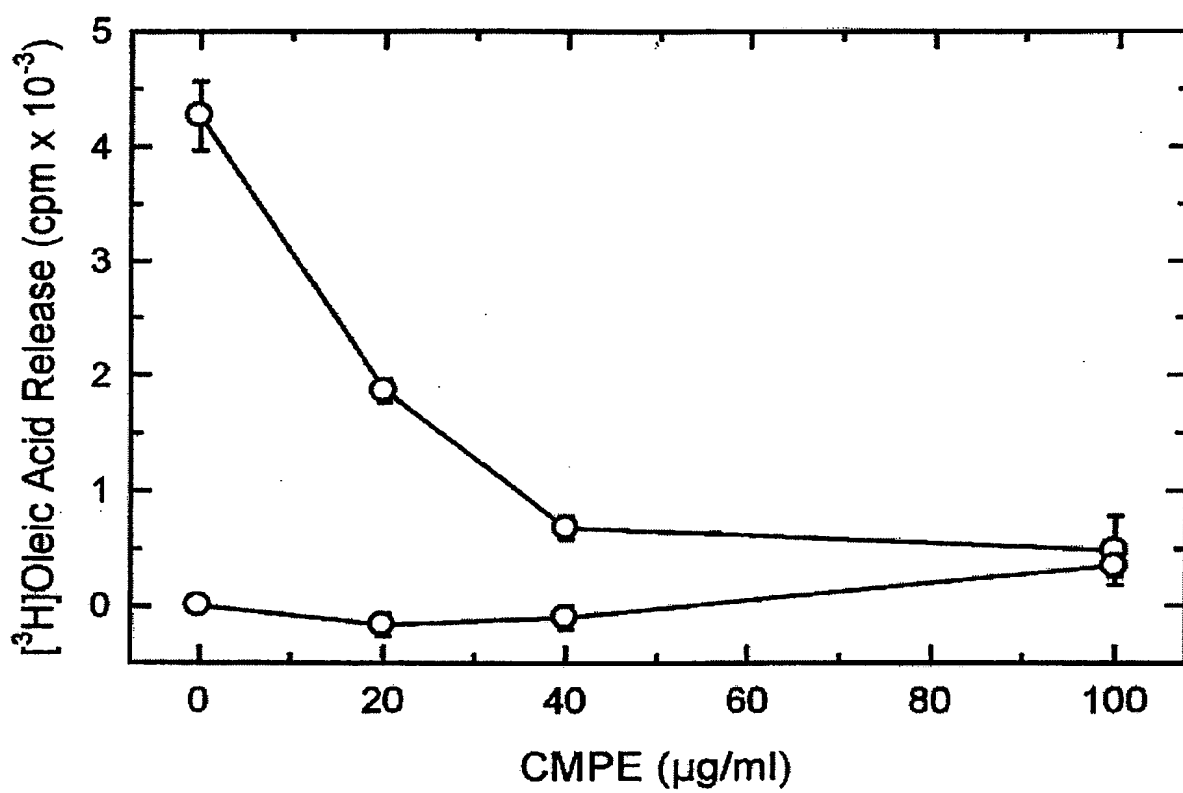
**Fig. 3.5: Lipid-conjugates inhibit the secretion of sPLA<sub>2</sub> from glial cells stimulated by LPS.**



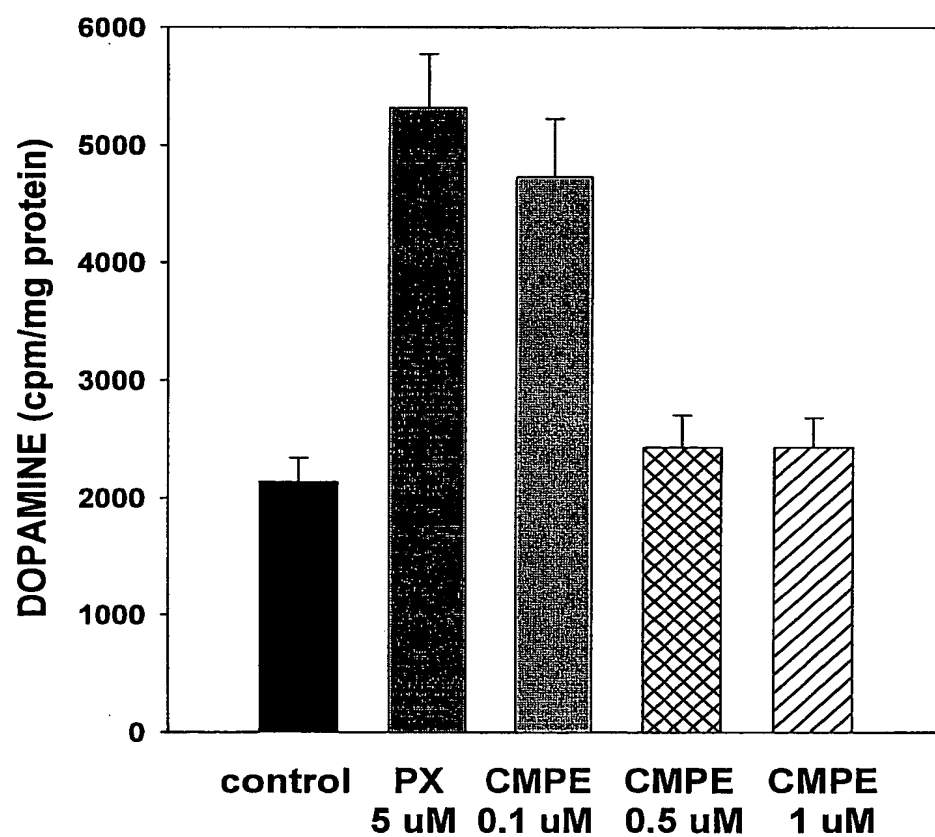
**Fig. 3.6: Lipid-conjugates inhibit PX-induced activation of PLA<sub>2</sub> (expressed as fatty acid release) in PC12 cells.**



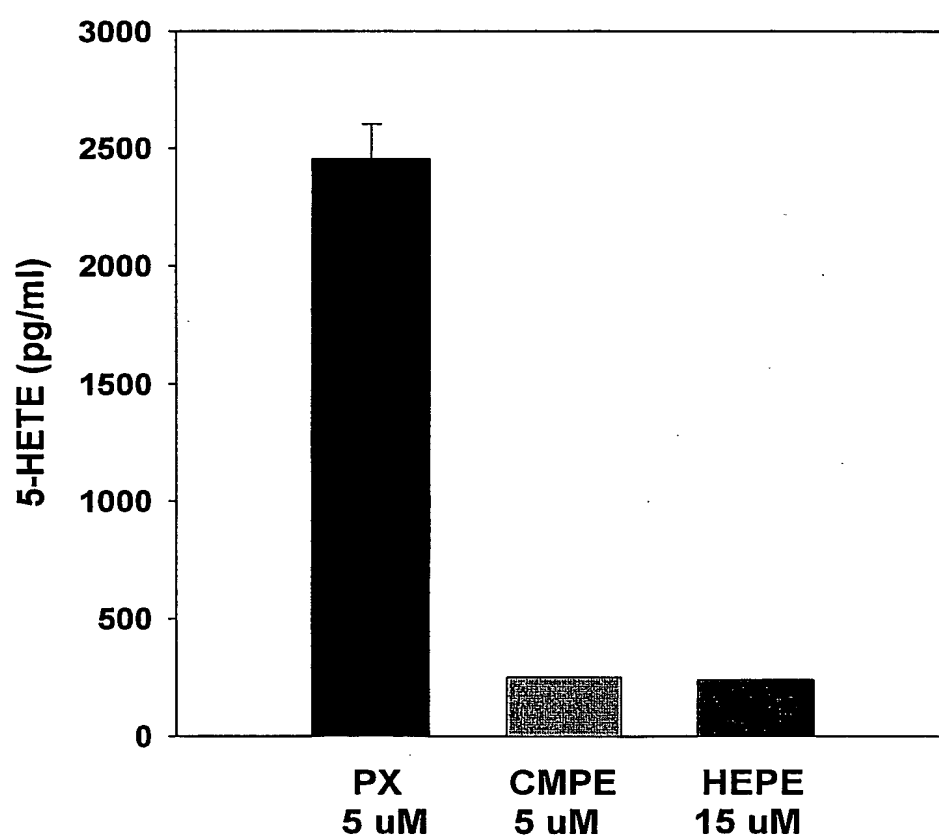
**Fig. 3.7: Effect of CMPE on LPS-induced OA release.**



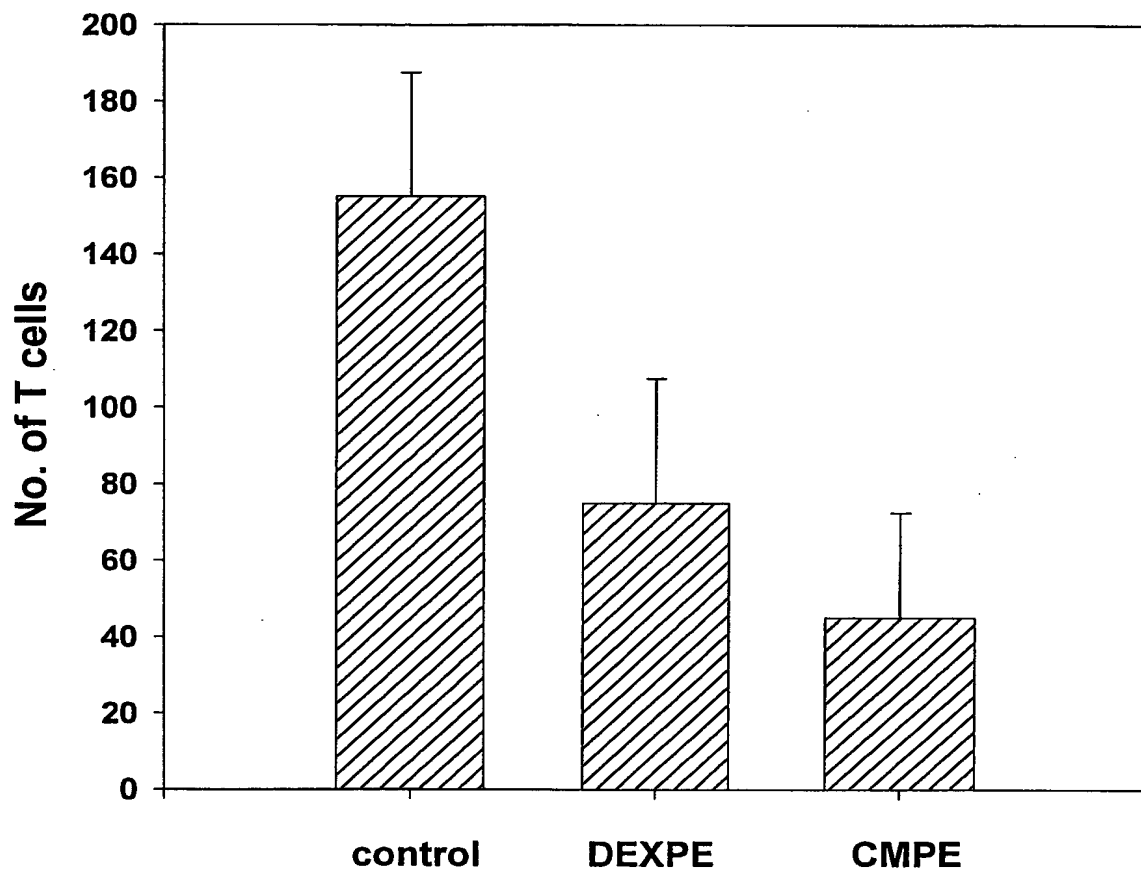
**Fig. 3.8: Lipid-conjugates inhibit PX-induced dopamine release by PC12 cells.**



**Fig. 3.9: Lipid-conjugates inhibit PX-induced production of 5-HETE by PC12 cells.**

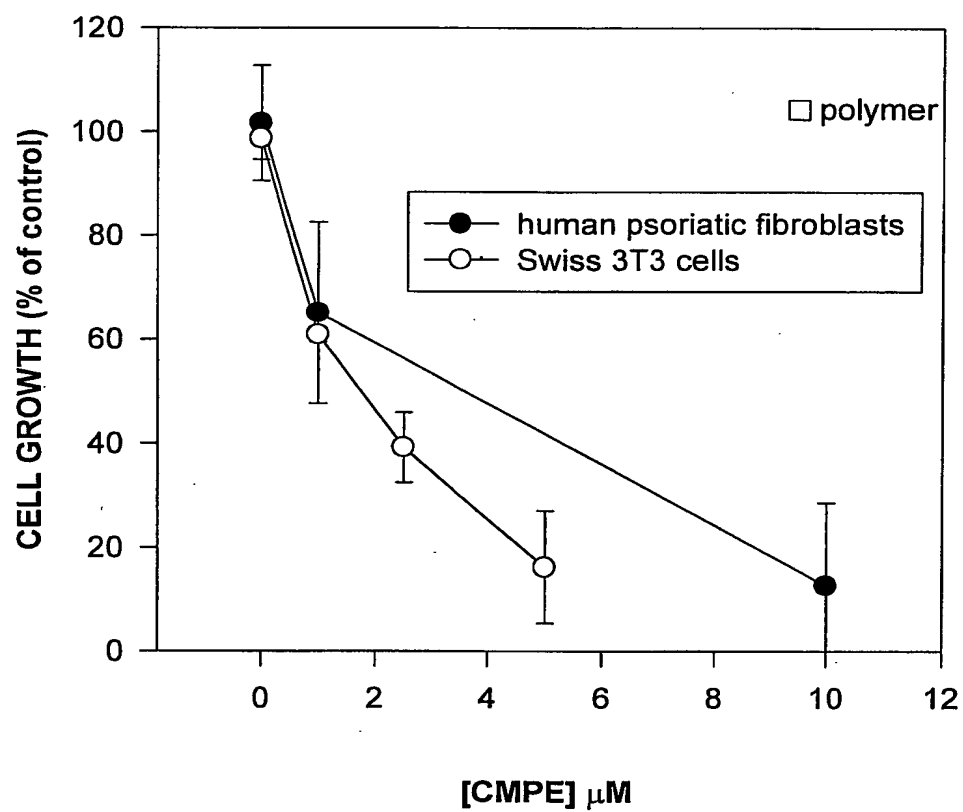


**Fig. 3.10: Effect of Lipid-conjugates on T cell permeation through a monolayer of endothelial cells.**

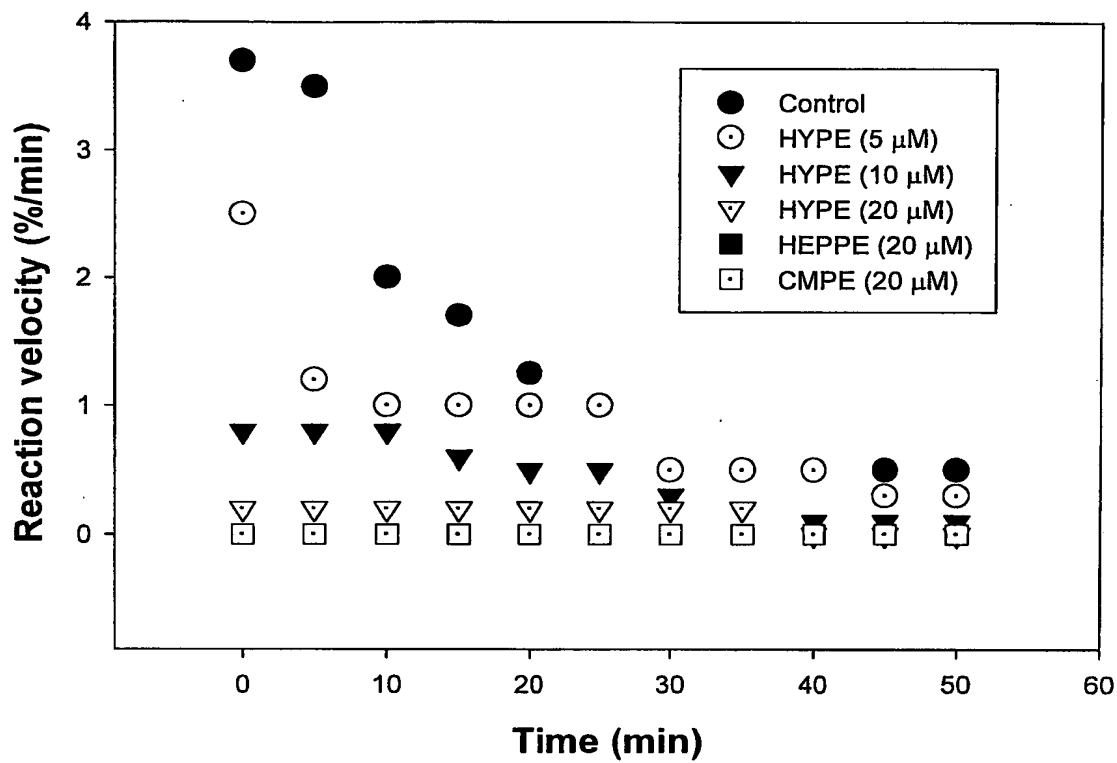




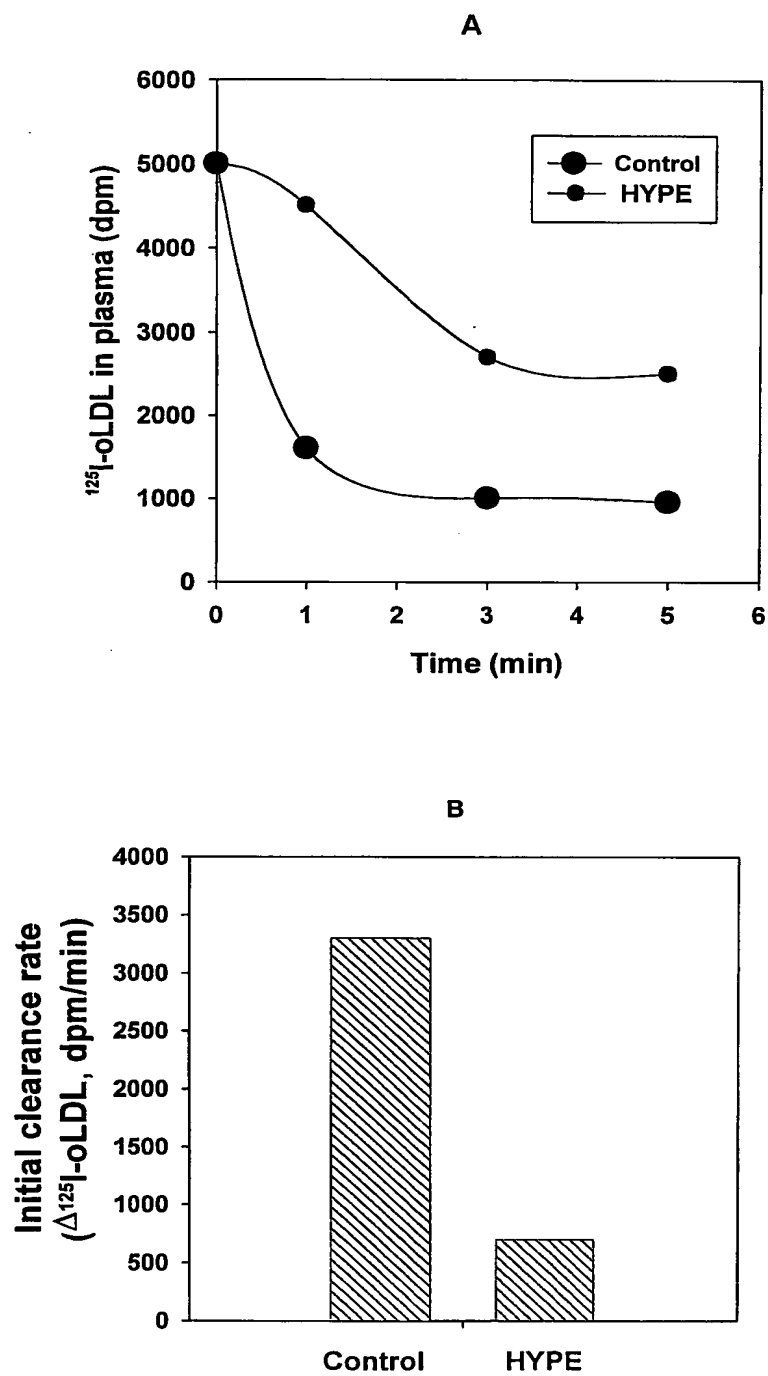
**Fig. 5.1: Effect of CMPE on the proliferation of cultured human psoriatic fibroblasts and Swiss 3T3 cells.**



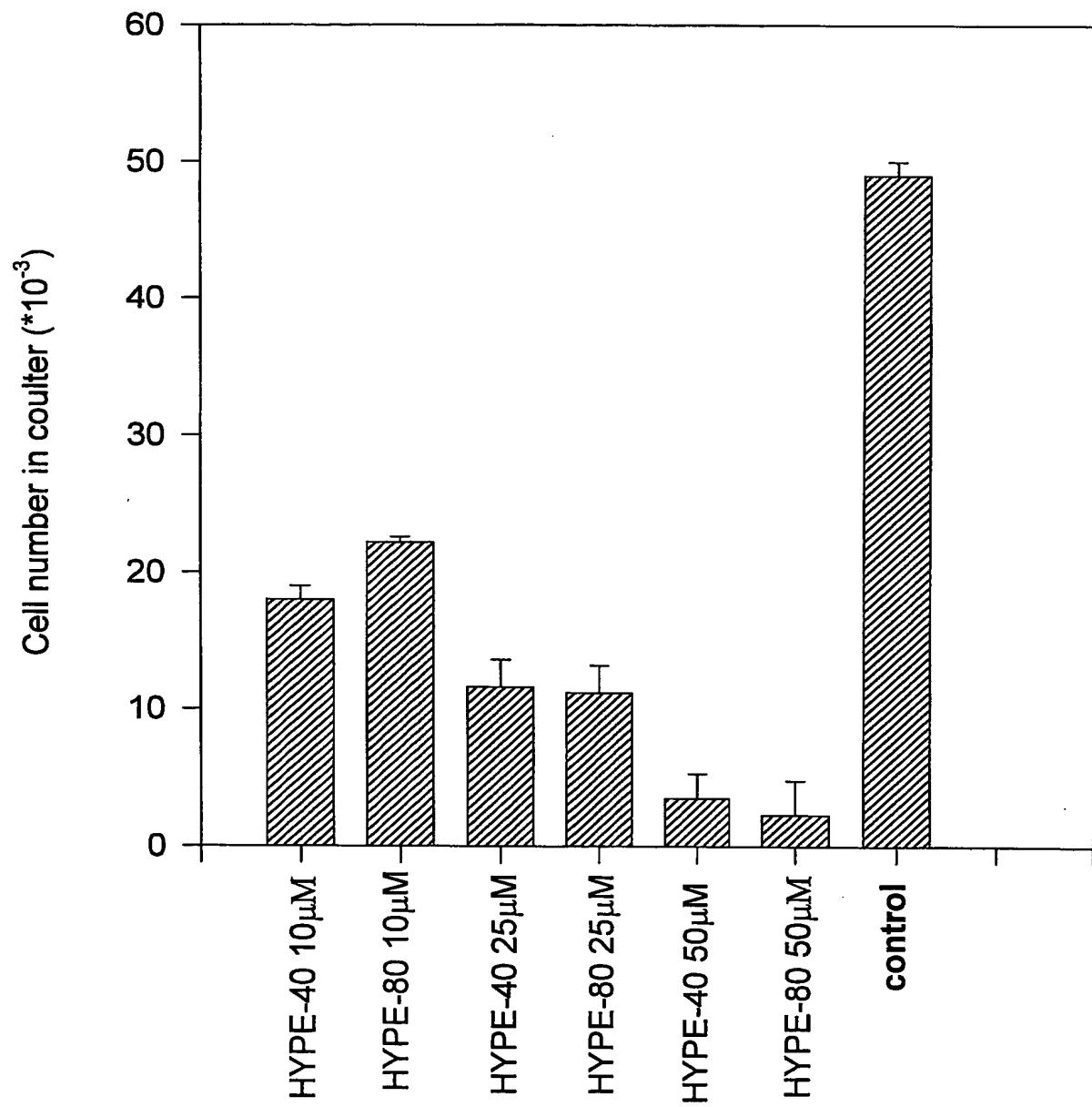
**Fig. 6.1: Effect of Lipid-conjugates on LDL-endogenous phospholipase A<sub>2</sub> activity.**



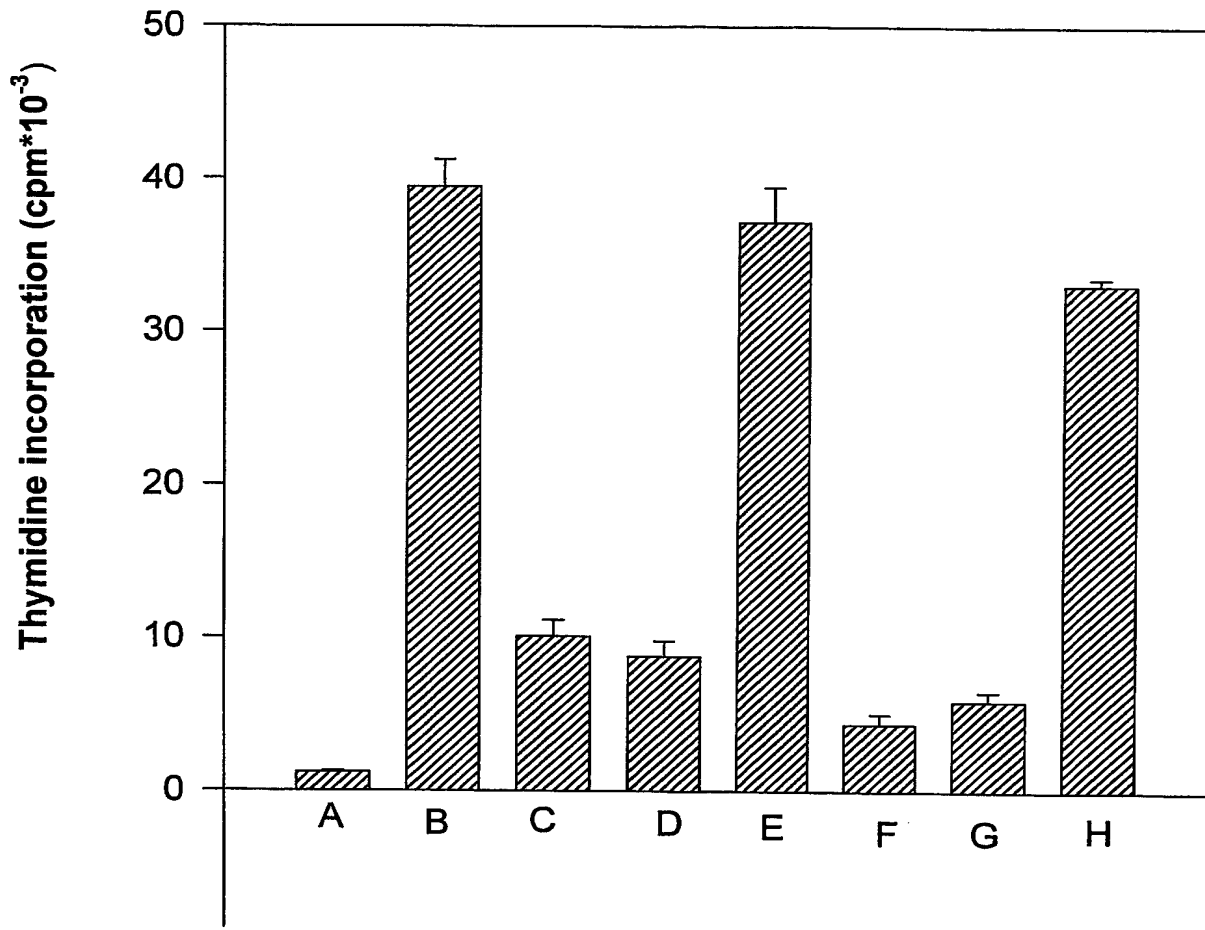
**Fig. 6.2: Effect of HYPE on uptake of oxidized LDL (ox LDL).**



**Fig. 7.1: Effect of HyPE on bovine aortic smooth muscle cell (SMC) proliferation.**



**Fig. 7.2: Effect of HYPE on proliferation of bovine aortic SMCs, stimulated with thrombin (48 hours).**



**Legend**

A - Basal, serum deficient DMEM

B - Control, thrombin

C - Thrombin, no wash-out, and after 6 hours add 50 $\mu$ M HYPE

D - Thrombin+50 $\mu$ M HYPE

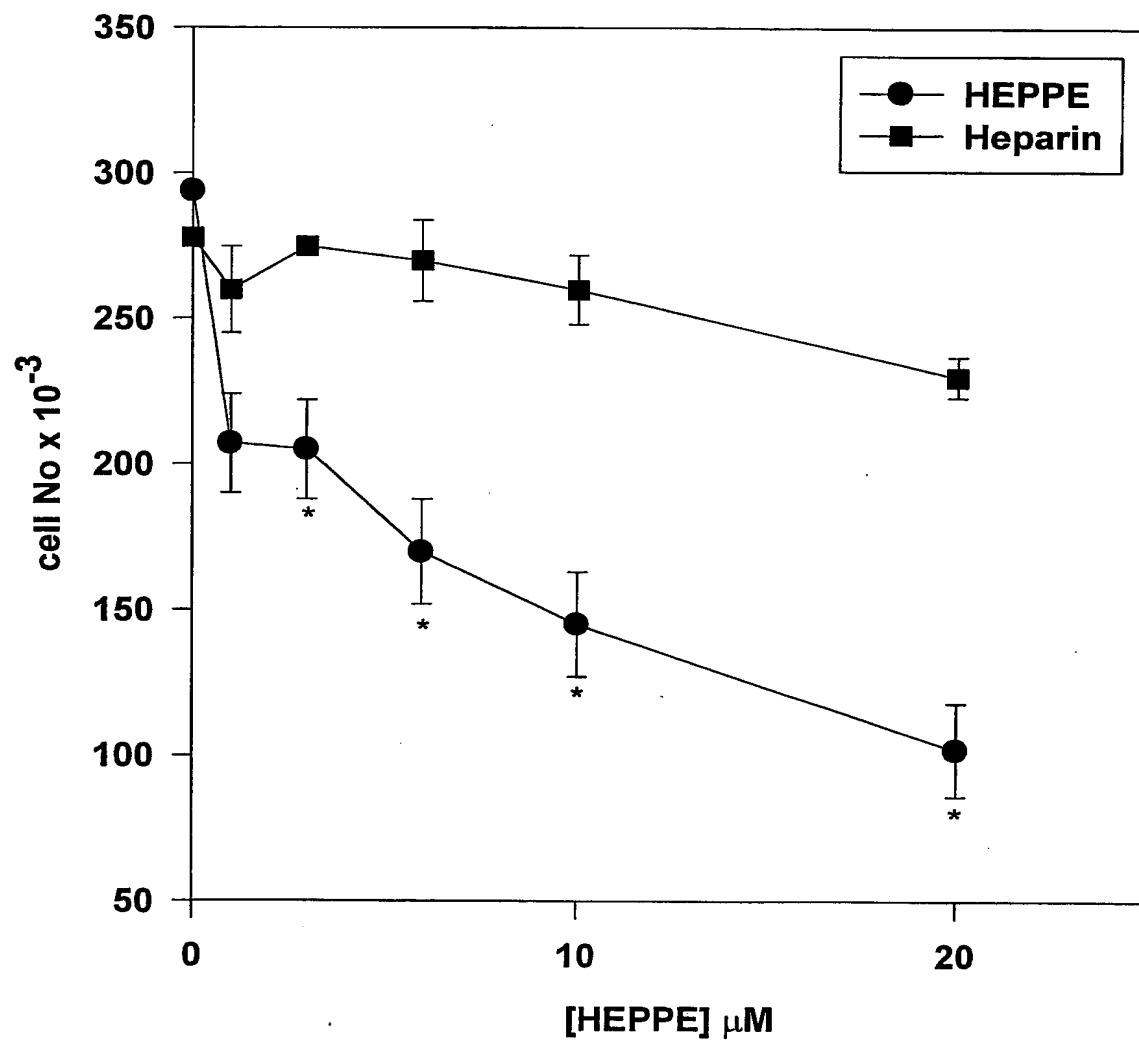
E - Thrombin, 6 hours, then wash-out of thrombin, further incubation with DMEM

F - Thrombin, 6 hours, wash-out of thrombin, add 50 $\mu$ M HYPE

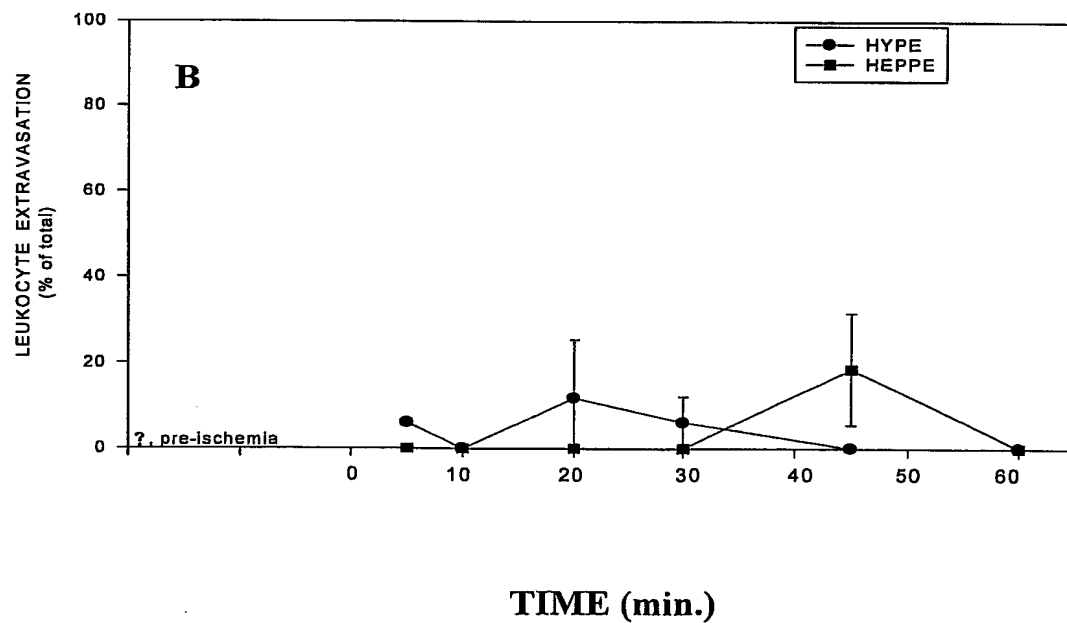
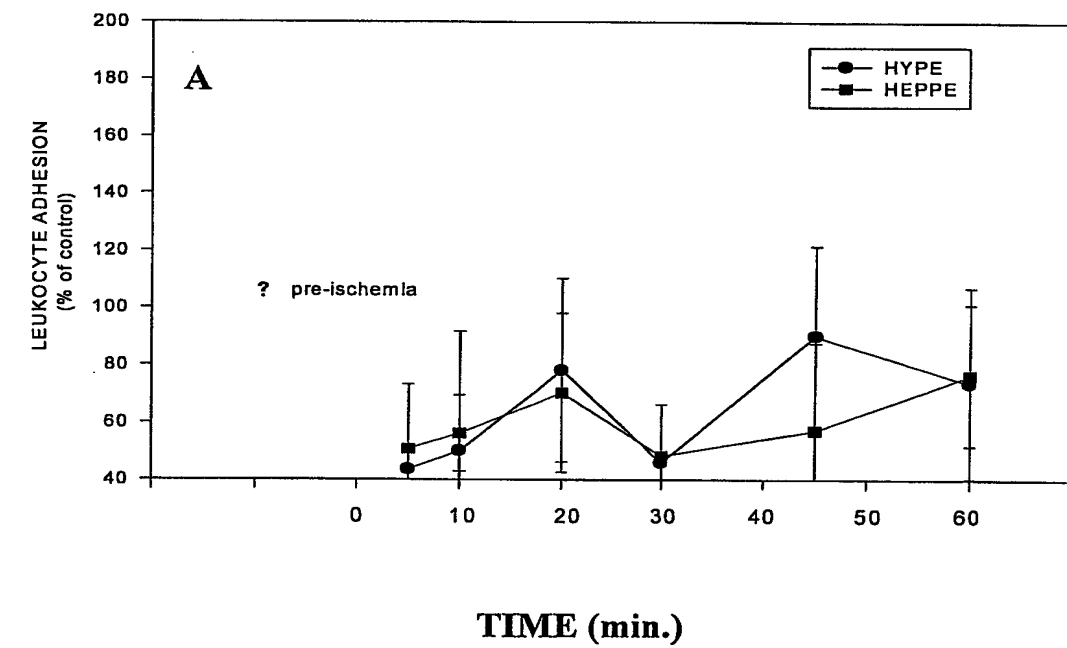
G - Thrombin, 6 hours, then harvest and counting

H - DMEM+10% fetal calf serum

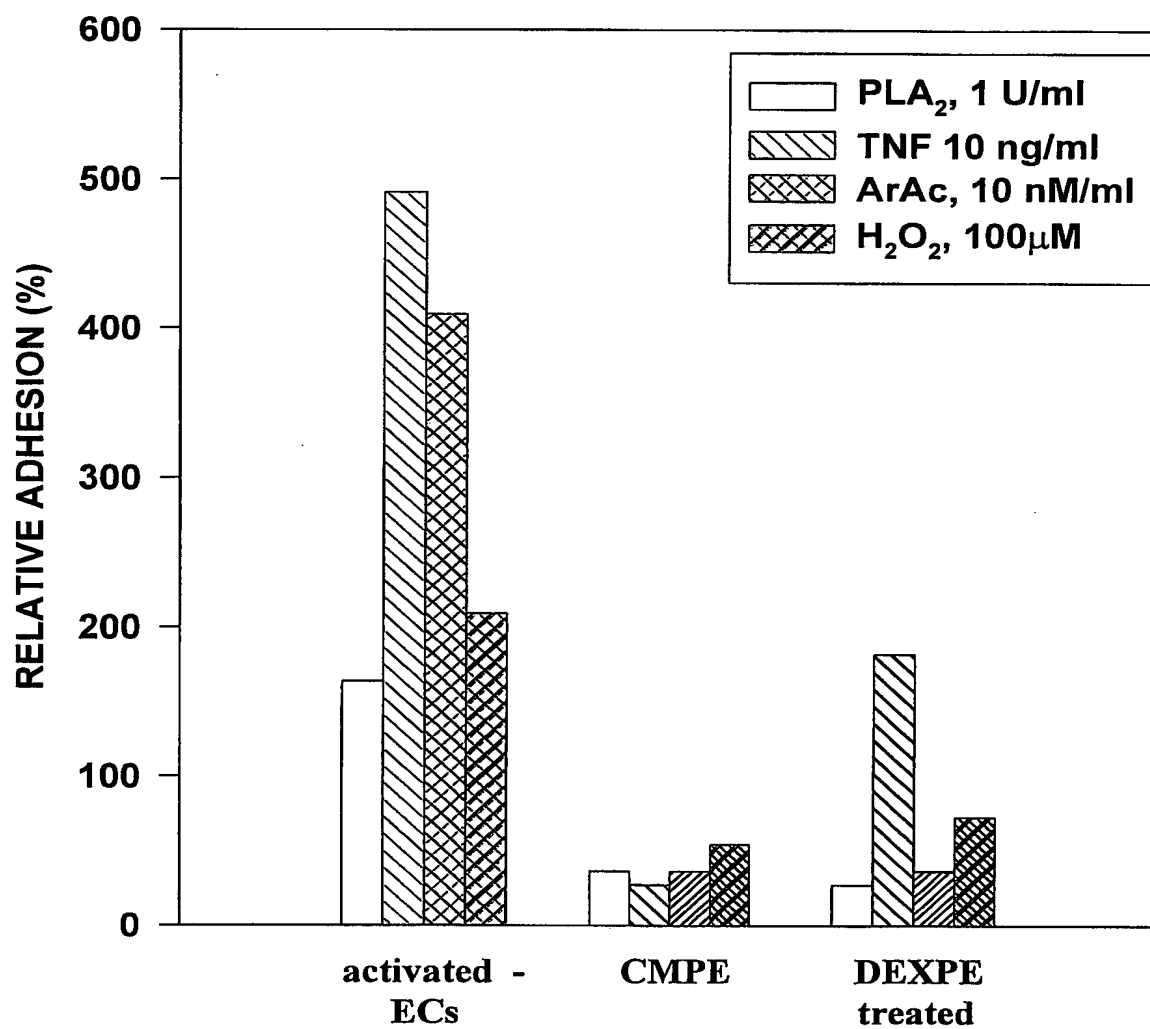
**Fig. 7.3: Effect of Lipid-conjugates on proliferation of human venous smooth muscle cells.**



**Fig. 7.4: Effect of Lipid-conjugates on ischemia/reperfusion – induced leukocyte adhesion (A) and extravasation (B) in rat cremaster muscle.**

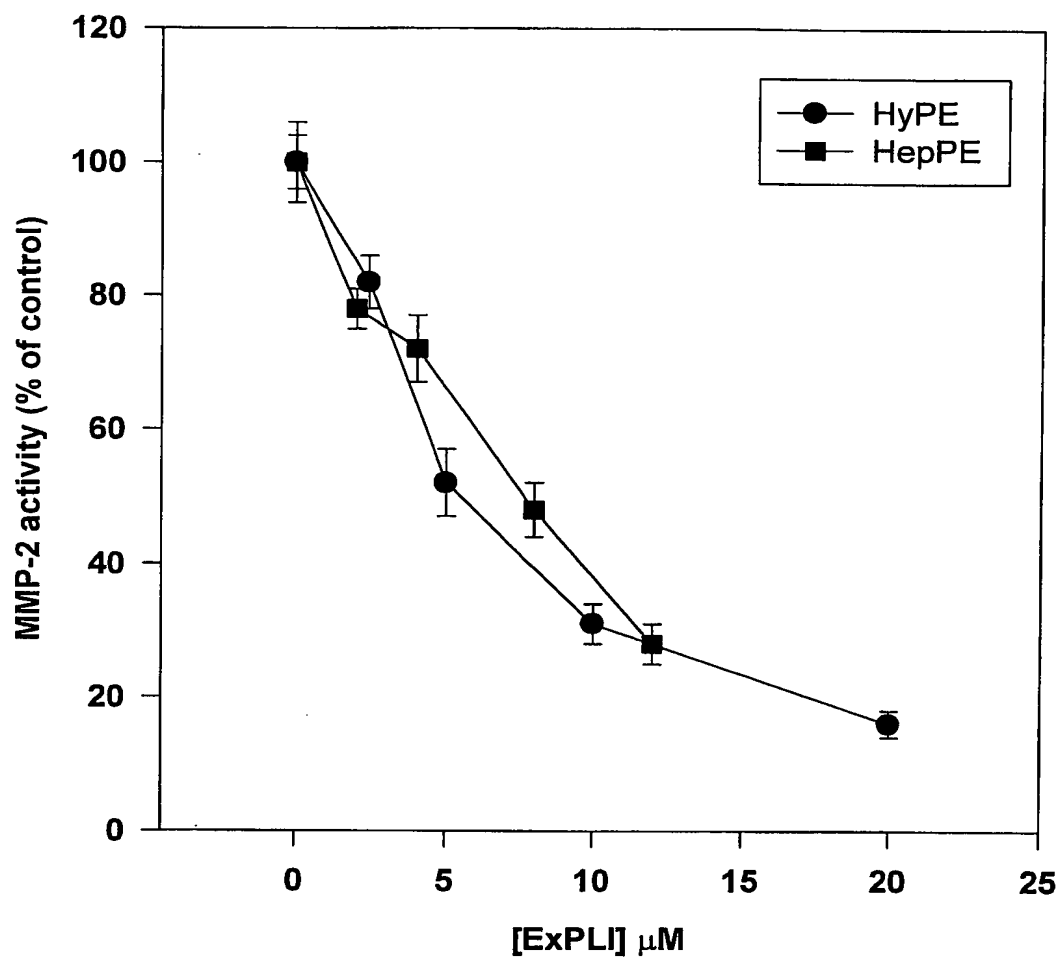


**Fig. 7.5: Effect of Lipid-conjugates on red blood cell (RBC) adhesion to activated endothelial cells (EC).**

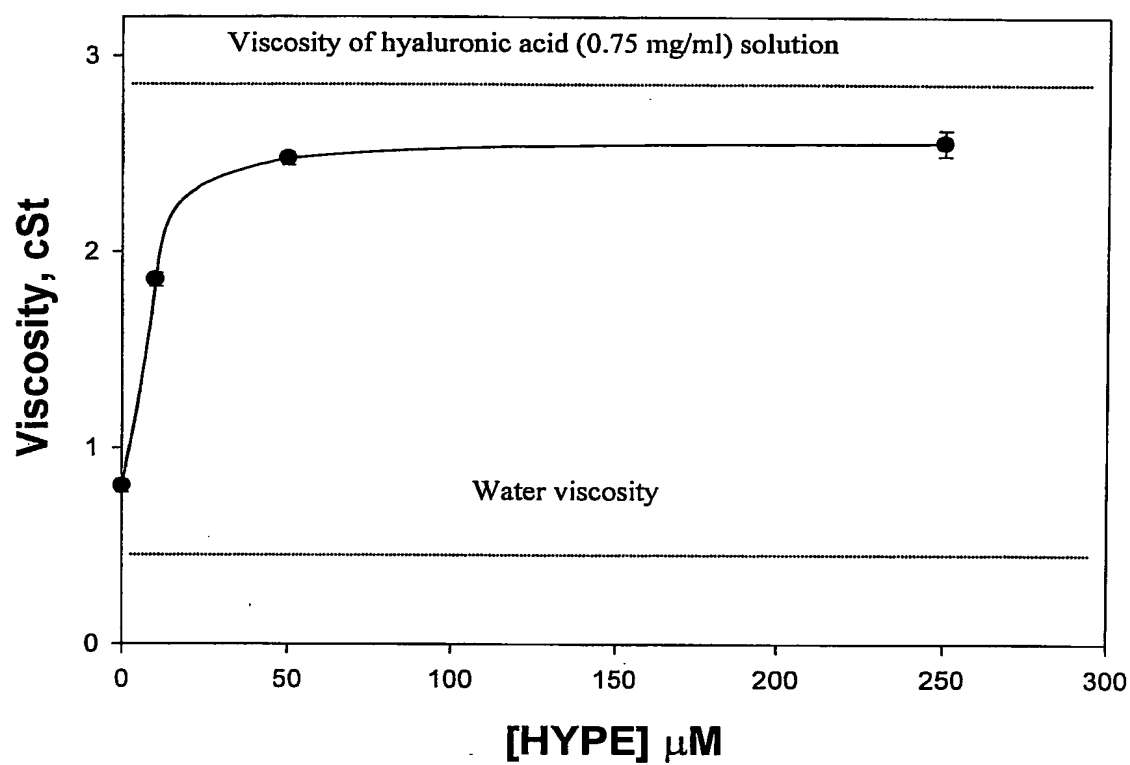




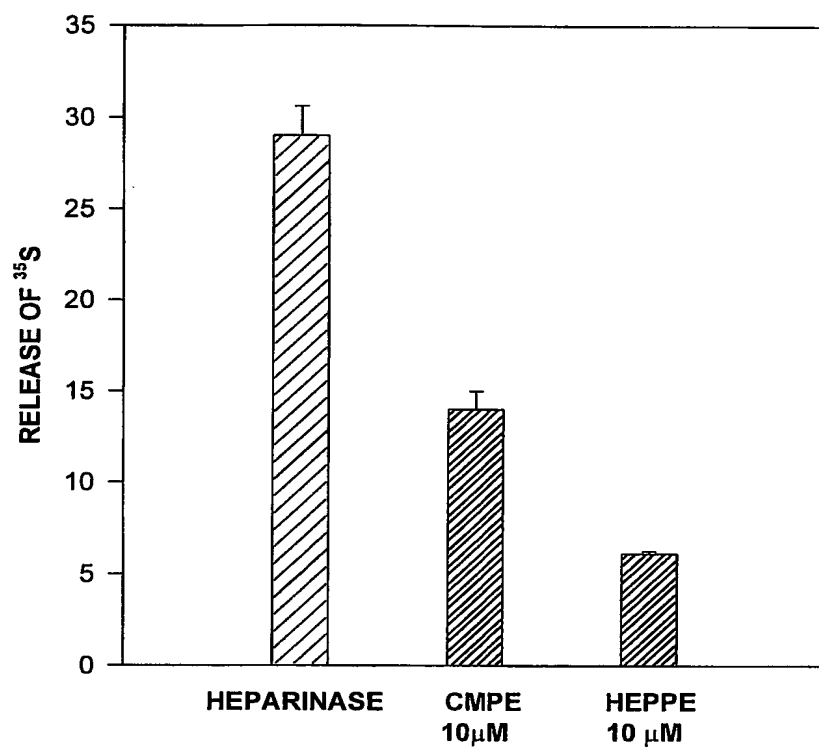
**Fig. 8.1: Effect of Lipid-conjugates on secretion of collagenase IV (MMP-2) by human fibrosarcoma cells.**



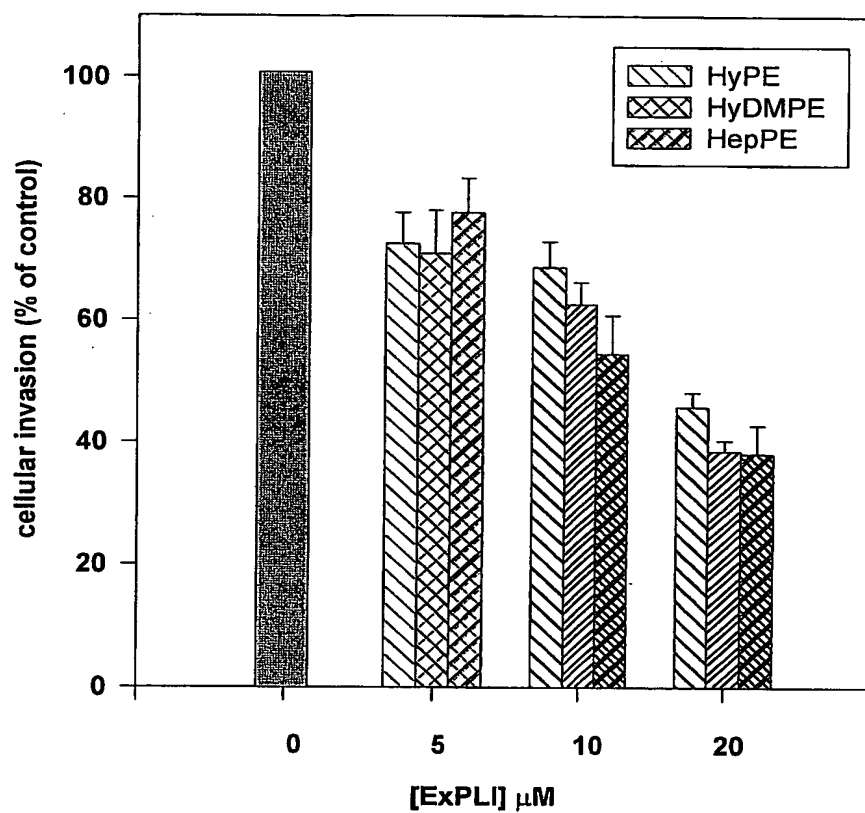
**Fig. 8.2: HYPE inhibits hyaluronic acid degradation by hyaluronidase.**



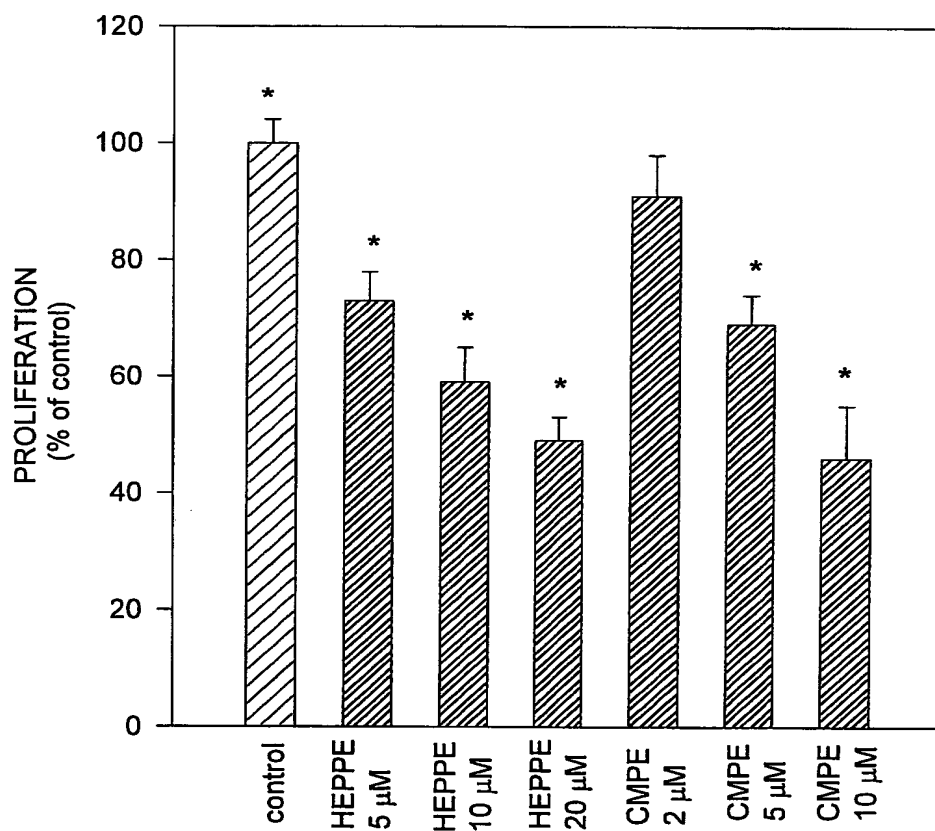
**Fig. 8.3: Effect of Lipid-conjugates on the activity of exogenous heparinase.**



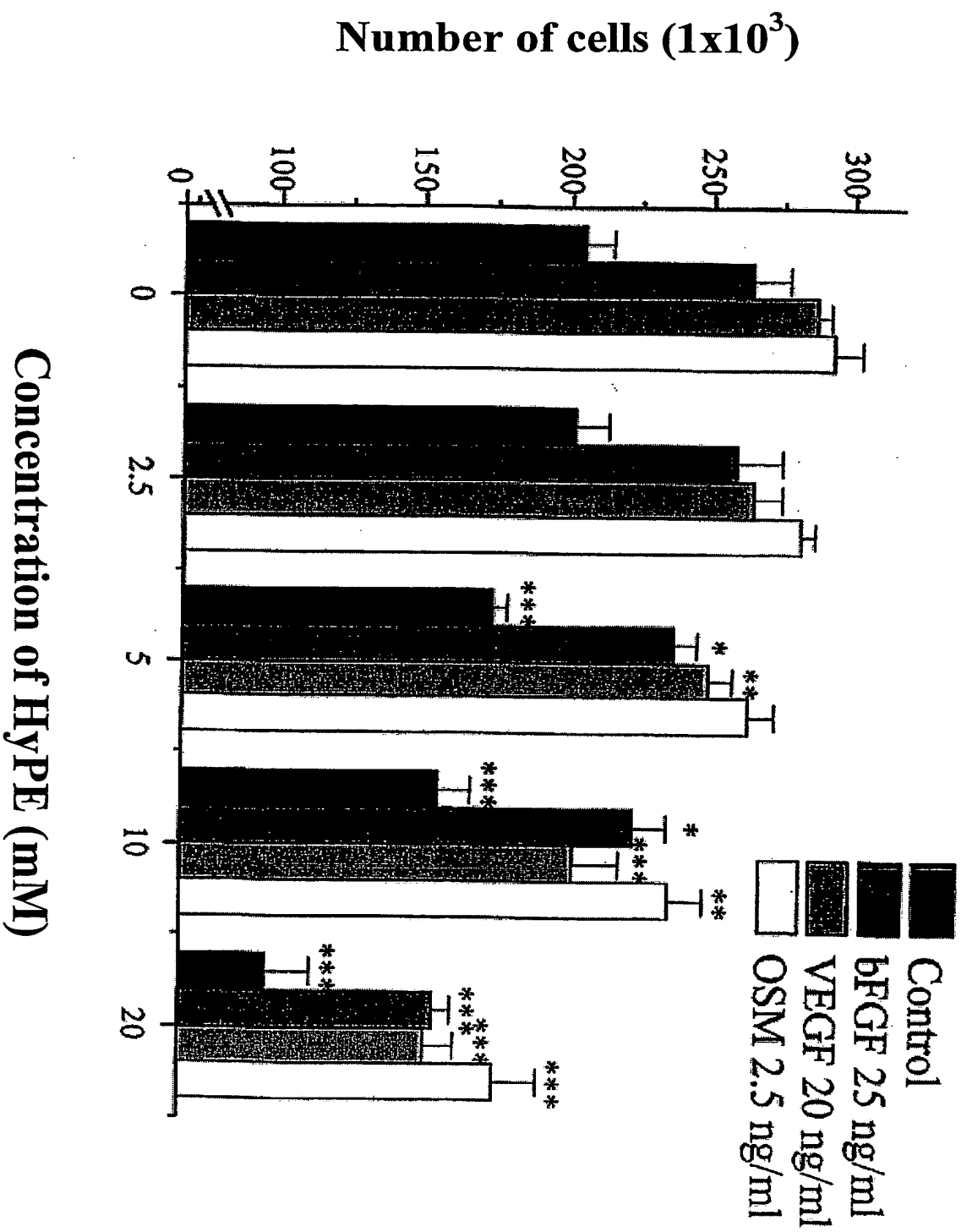
**Fig. 8.4: Effect of Lipid-conjugates on invasiveness of human fibrosarcoma cells.**



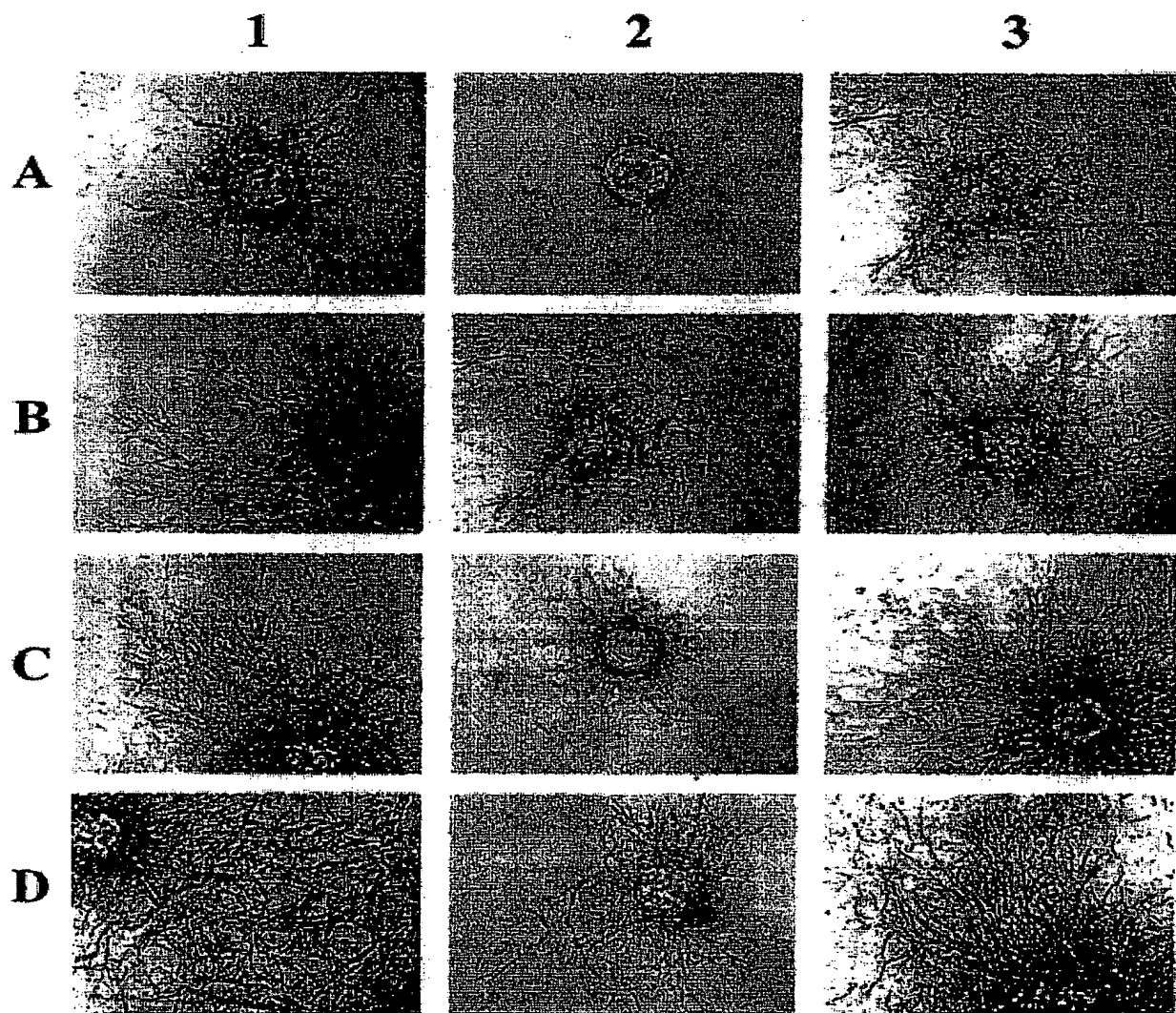
**Fig. 8.5: Effect of Lipid-conjugates on proliferation of bovine aortic endothelial cells (EC).**



**Fig. 8.6: Effect of HyPE on proliferation of human bone marrow endothelial cells (HBMEC) induced by growth factors.**



**Fig. 8.7: Effect of Lipid-conjugates on growth factor-induced capillary formation by HNMEC in fibrin gel**

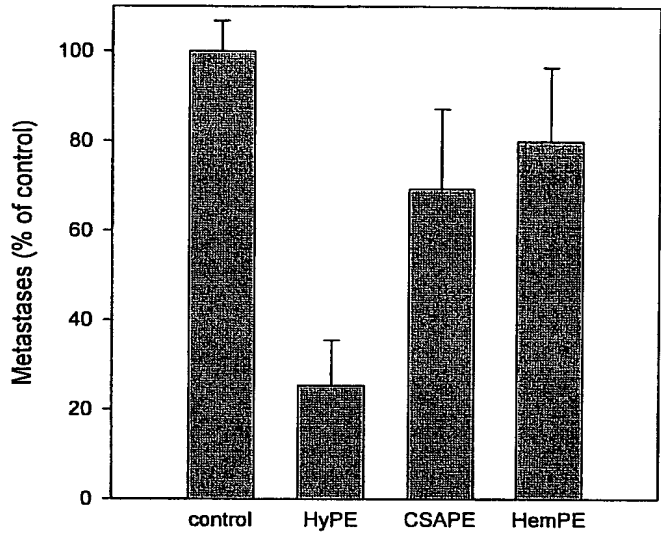


Line A: control  
 Line B: b-FGF (25ng/ml)  
 Line C: VEGF (20ng/ml)  
 Line D: OSM (2.5nm/ml).

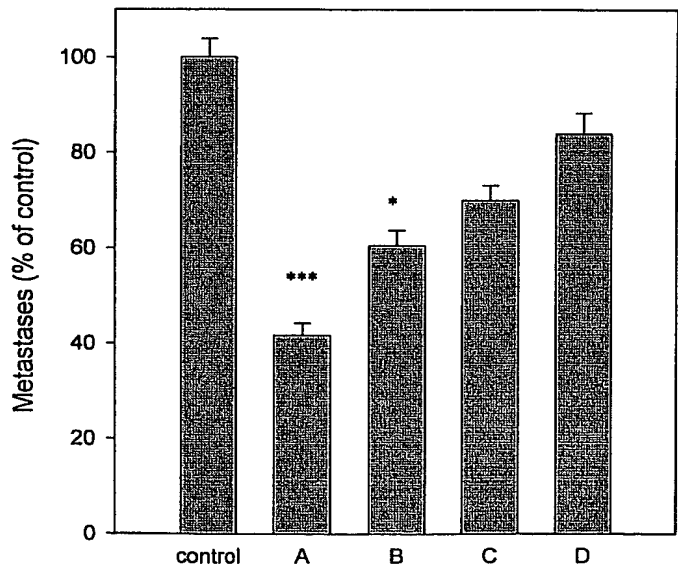
Column 1: Without HyPE  
 Column 2: HyPE 20 $\mu$ M  
 Column 3: Hyaluronic acid 20 $\mu$ M

**Fig. 8.8: Effect of ExPLIs on mouse lung metastases formation induced by mouse melanoma cells.**

**I**

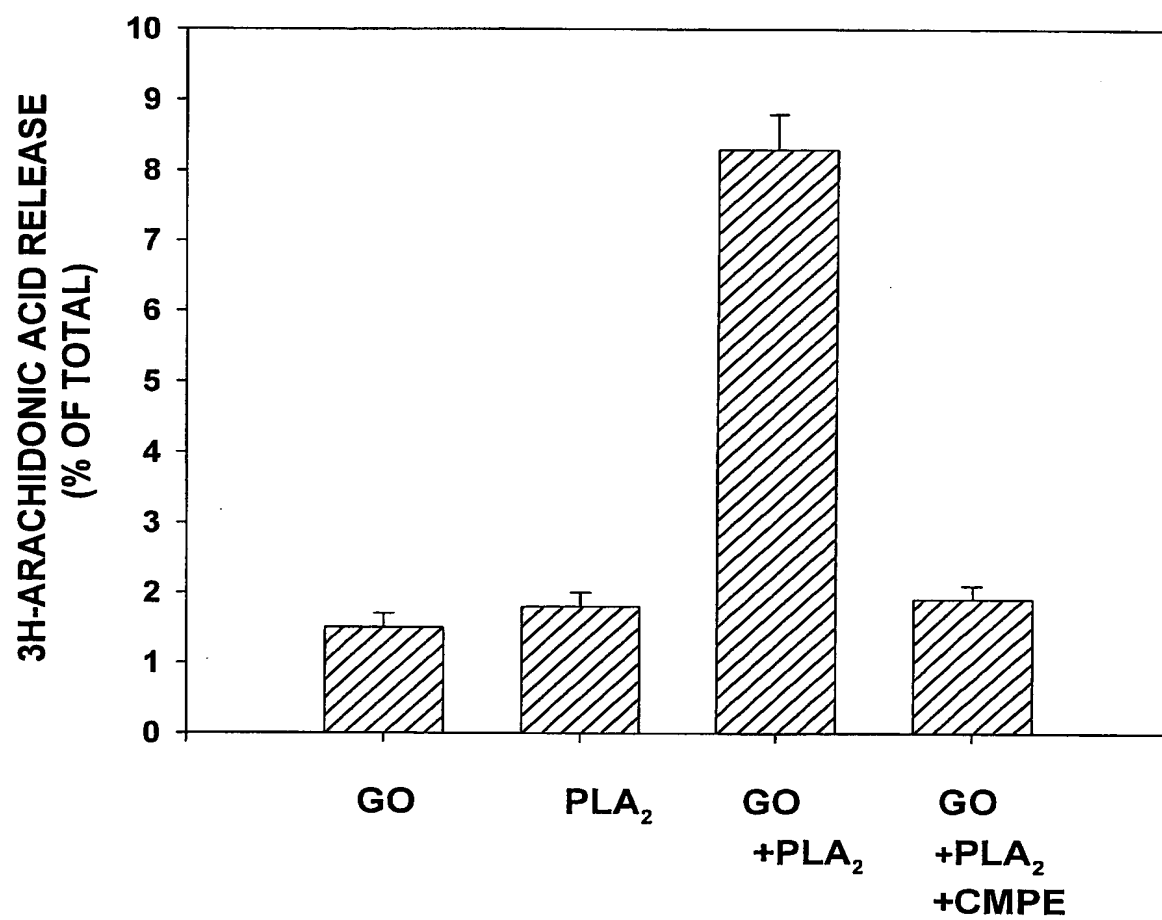


**II**

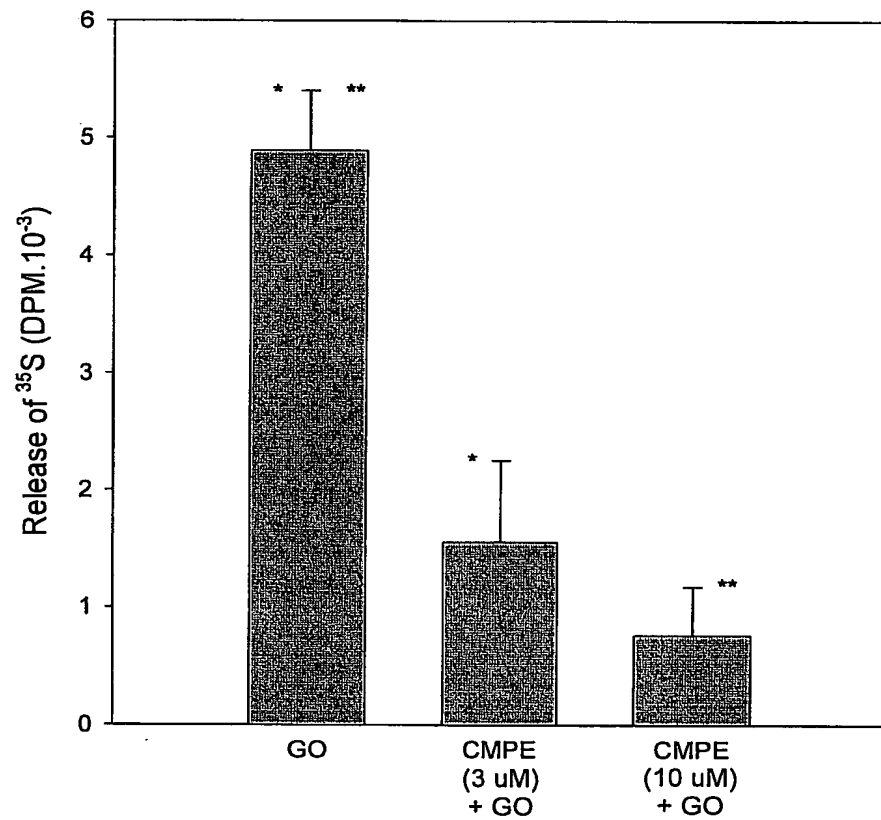




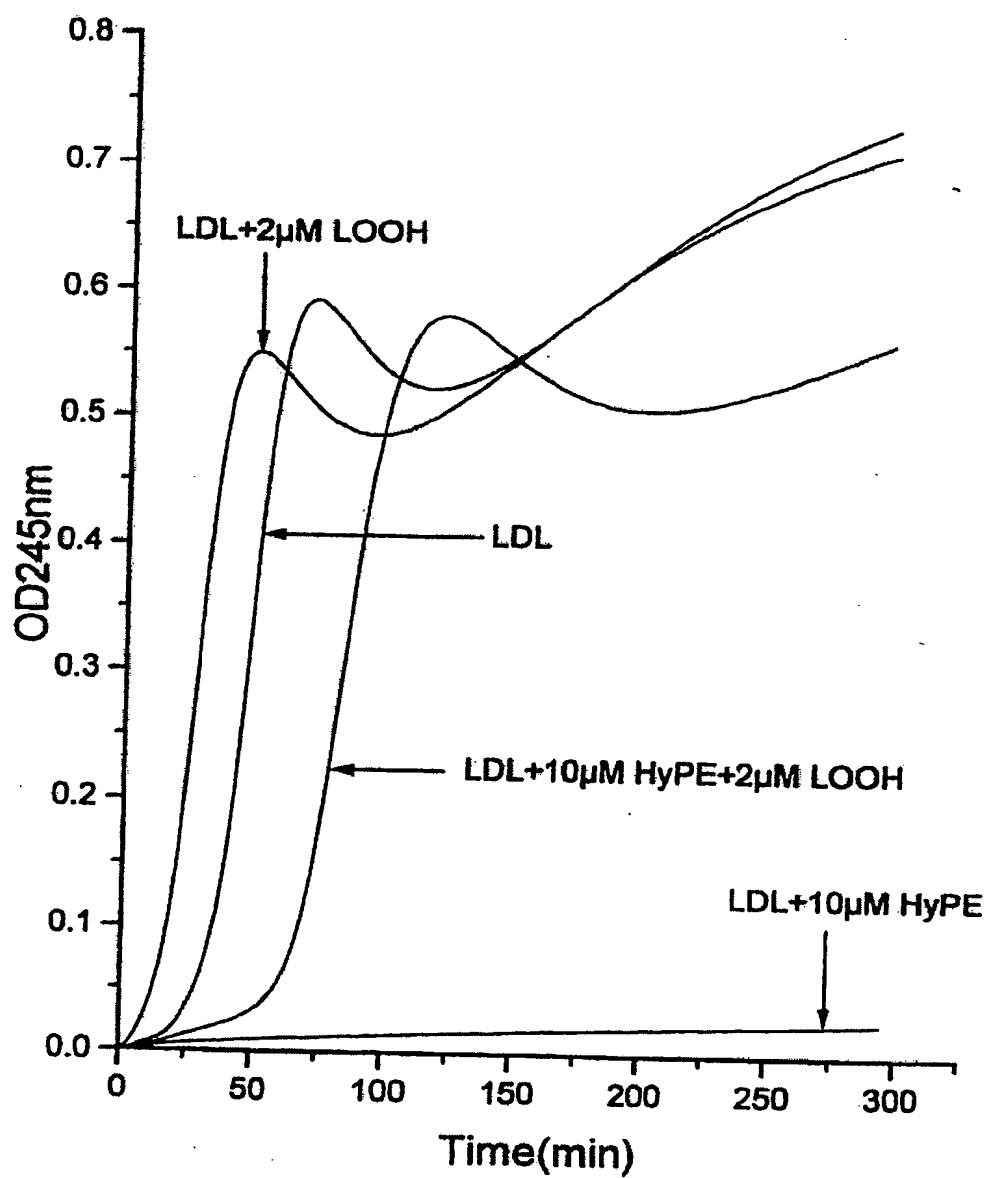
**Fig. 9.1: CMPE protects BGM cells from membrane lysis induced by combined action of hydrogen peroxide (produced by glucose oxidase = GO), and exogenous phospholipase A<sub>2</sub> (PLA<sub>2</sub>).**



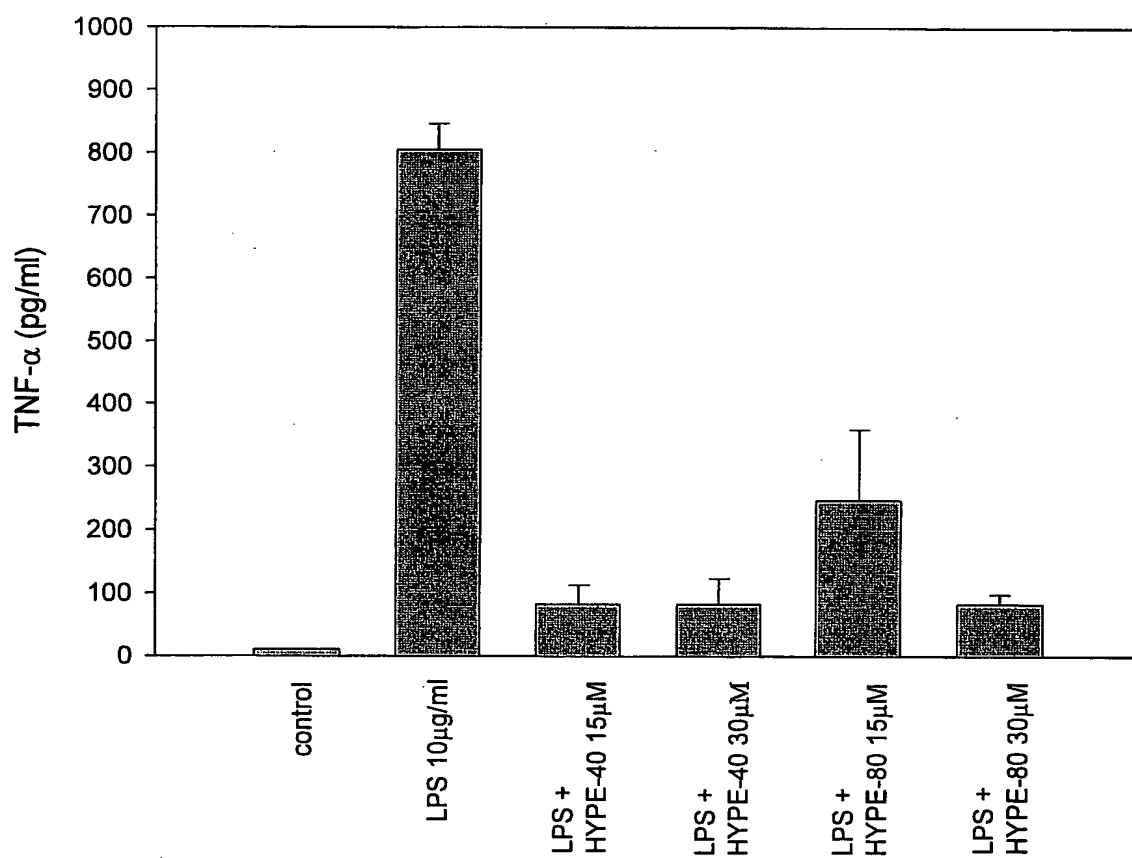
**Fig. 9.2: CMPE protects BGM cells from glycosaminoglycan degradation by Hydrogen peroxide (produced by GO).**



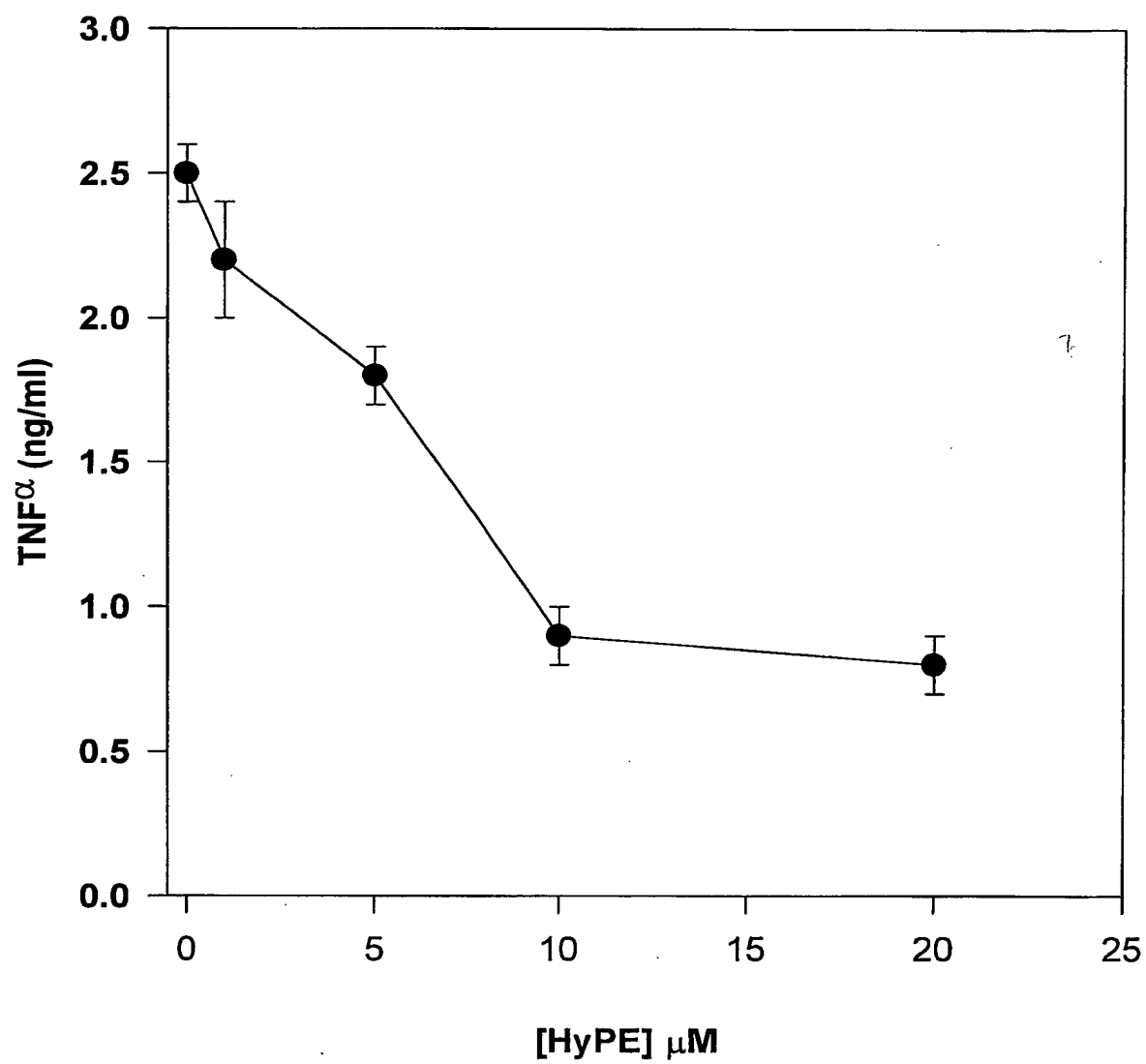
**Fig. 9.3: HYPE protects LDL from copper-induced oxidation.**



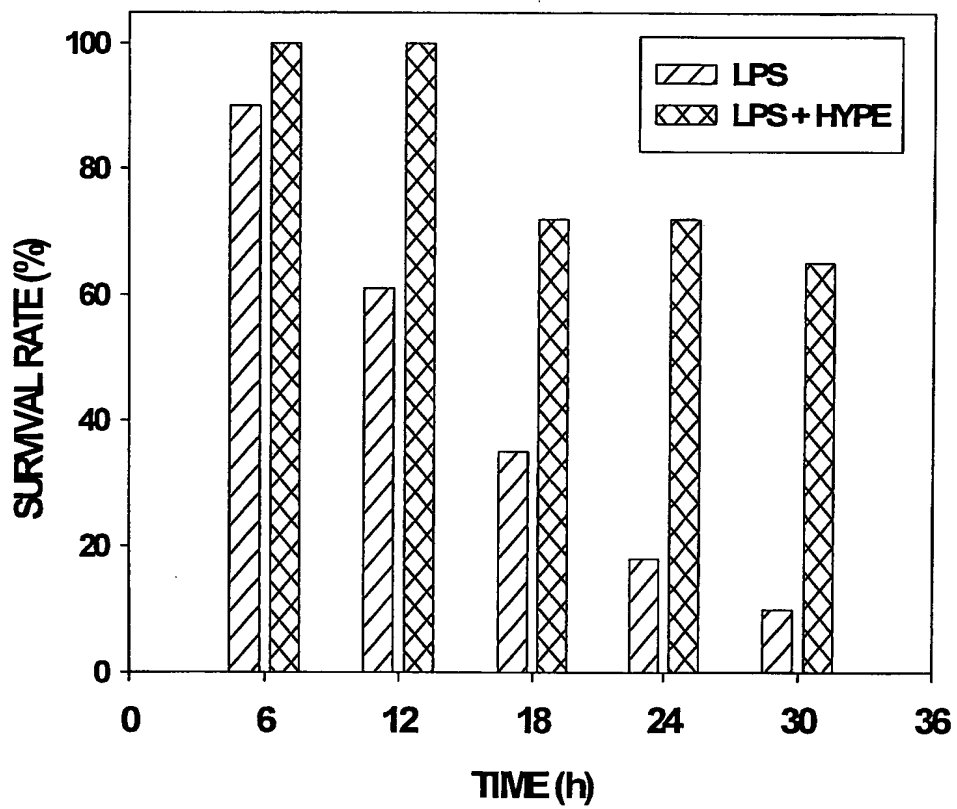
**Fig. 11.1-I: Effect of lipid-conjugates on LPS-induced production of TNF $\alpha$  in human whole blood.**



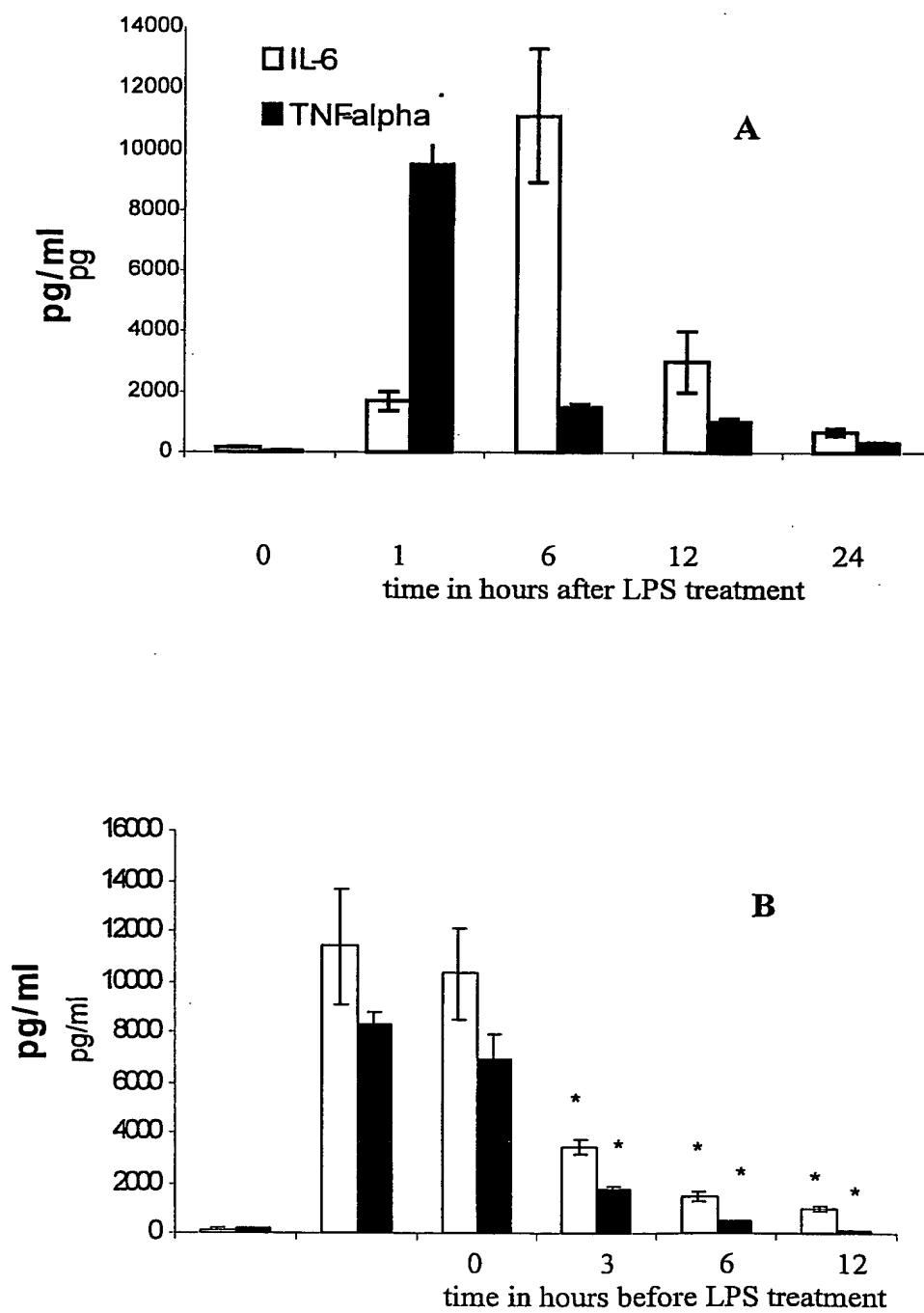
**Fig. 11.1-II: Effect of HyPE on LPS-induced production of  $\text{TNF}\alpha$  in human whole blood.**



**Fig. 11.2: Effect of HyPE on rat survival in LPS-induced endotoxinemia.**

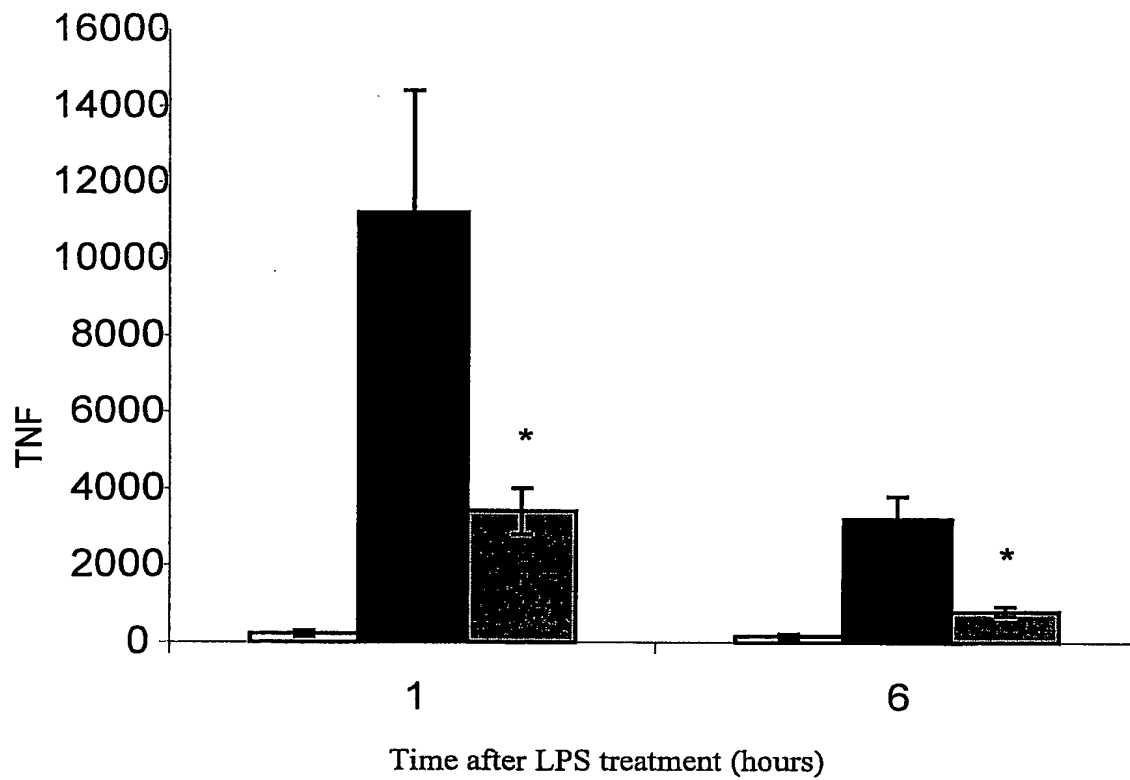


**Fig. 11.3: Effect of HyPE on serum levels of TNF- $\alpha$  and IL-6 in septic rats.**



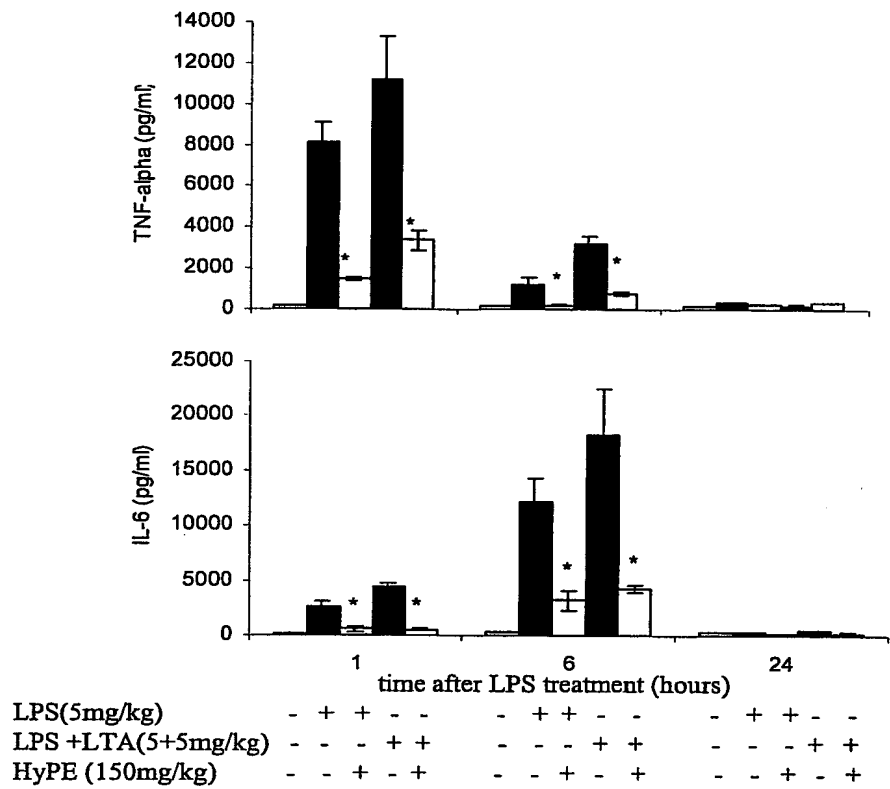
|                 |   |   |   |   |   |   |
|-----------------|---|---|---|---|---|---|
| LPS (7,5mg/kg)  | - | + | + | + | + | + |
| HyPE (150mg/kg) | - | - | + | + | + | + |

**Fig. 11.4: Effect of HyPE on TNF- $\alpha$  production after i.p. administration of LPS and simultaneous i.v. administration of HyPE.**

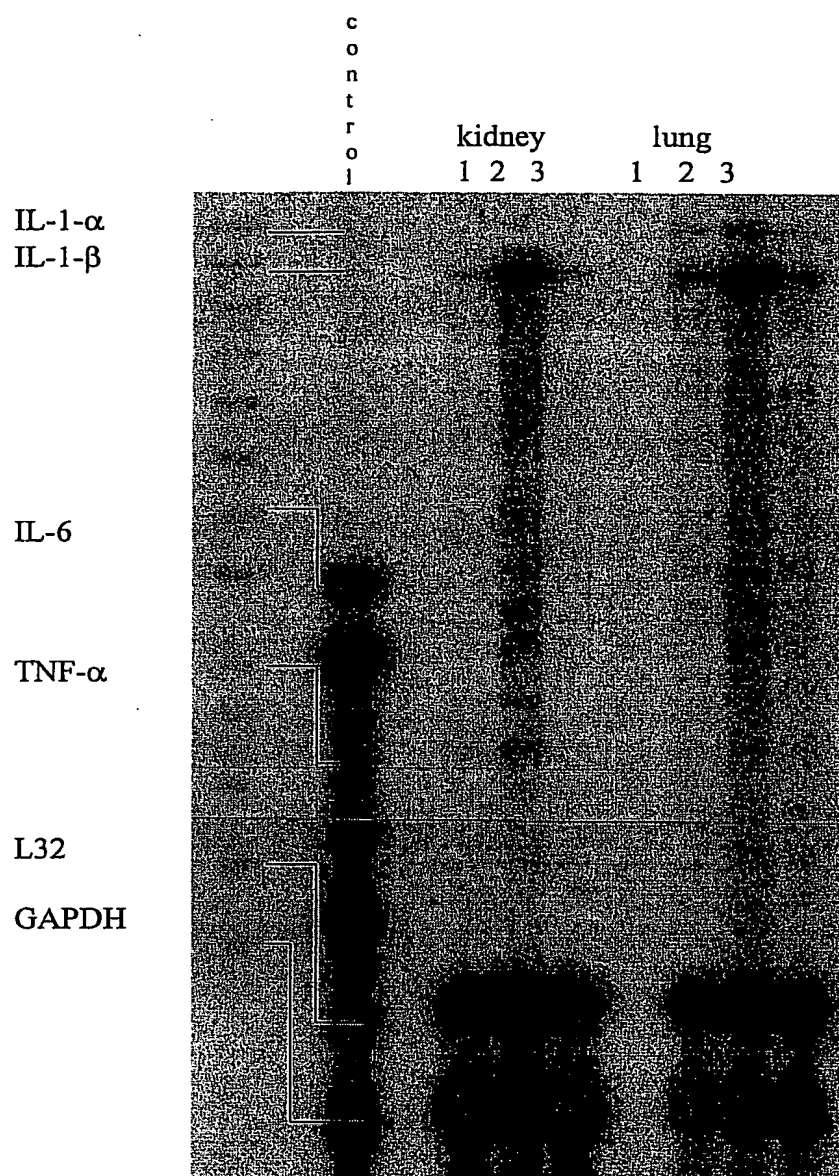




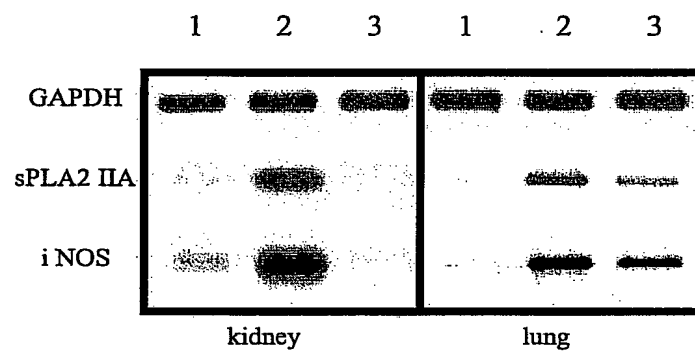
**Fig. 11.5: Effect of HyPE on serum cytokine levels in rats injected with LPS or LPS + LTA.**



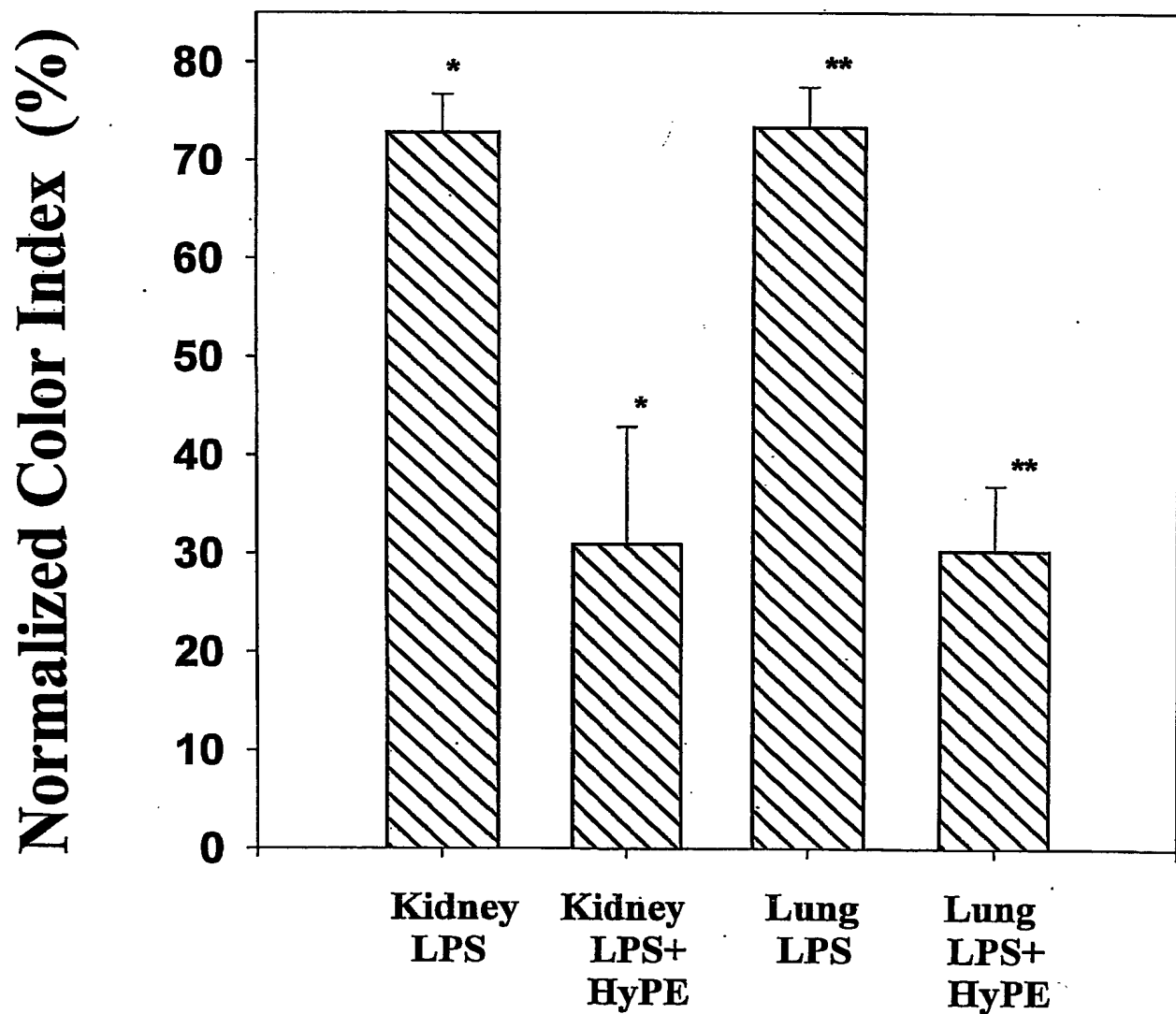
**Fig. 11.6: Effect of HyPE on mRNA expression of IL-1, TNF- $\alpha$  and IL-6 genes in lung and liver of rats with LPS-induced sepsis.**



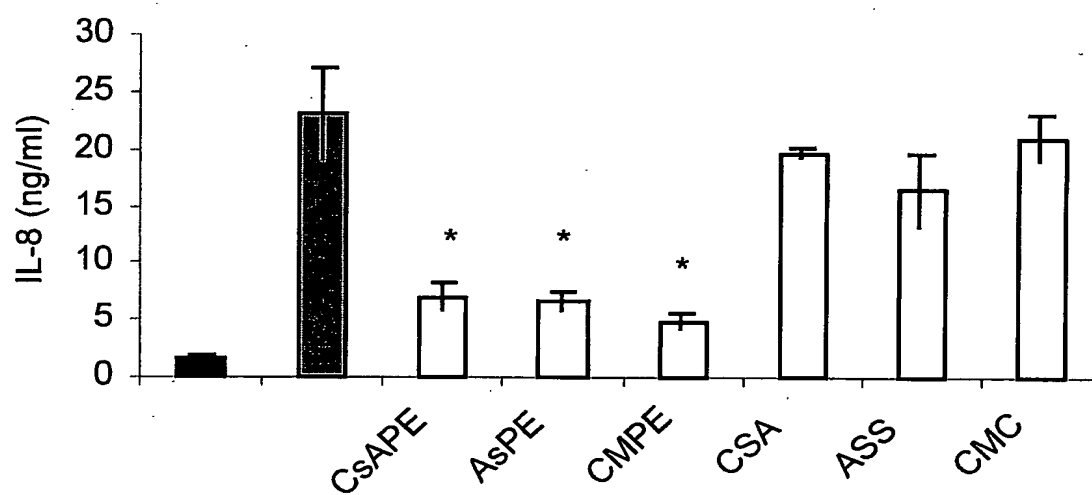
**Fig. 11.7: Effect of HyPE on mRNA expression of sPLA<sub>2</sub>-IIA and iNOS genes in kidney and lung of rats with LPS-induced sepsis.**



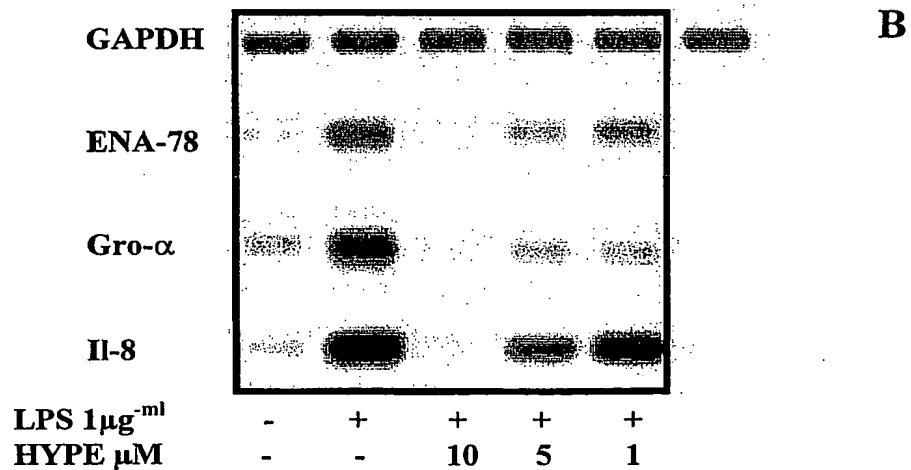
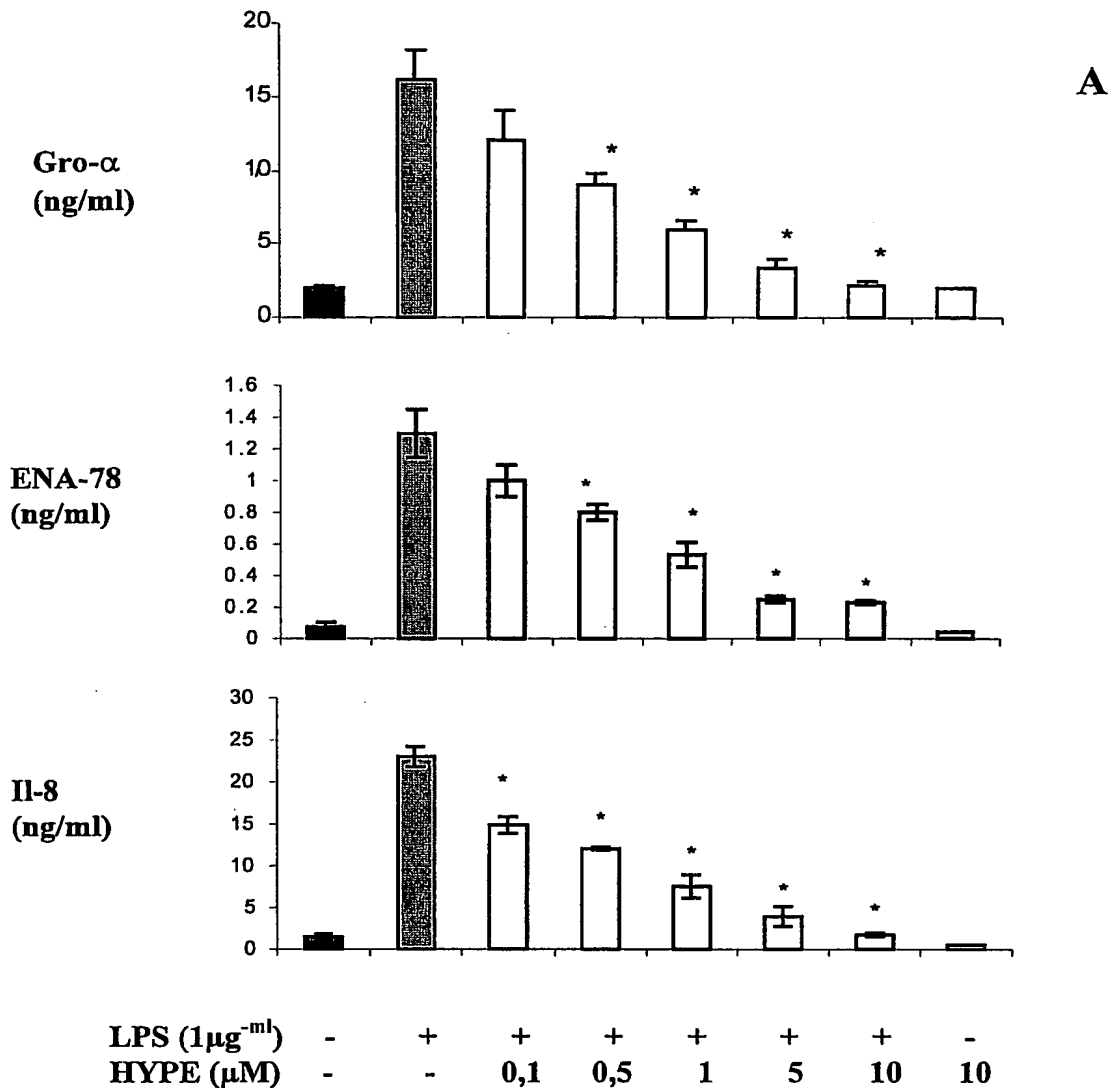
**Fig. 11.8: Effect of HyPE on ICAM-1 expression in lung and kidney of rats with LPS-induced sepsis.**



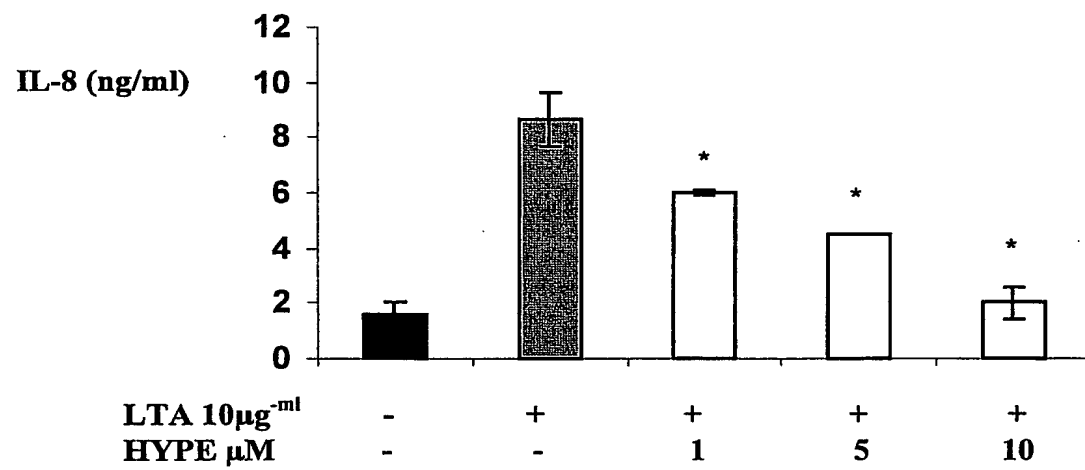
**Fig. 12.1: Effect of different Lipid-conjugates on LPS-induced IL-8 production.**



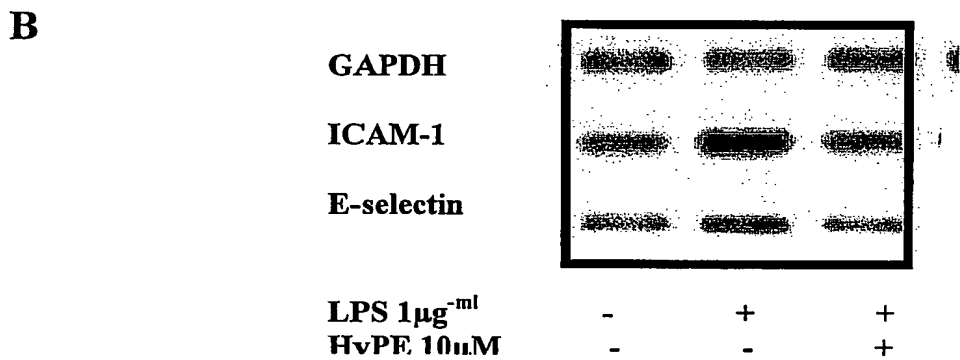
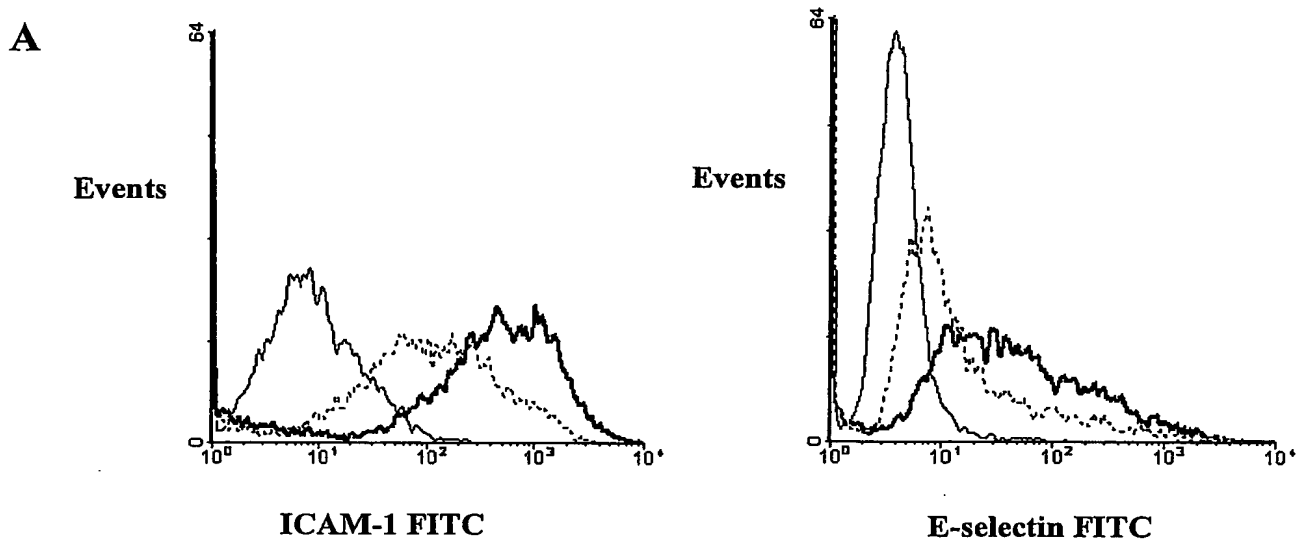
**Fig. 12.2: Effect of HyPE on LPS-induced chemokine production.**



**Fig. 12.3: Effect of HyPE on LTA-induced IL-8 production.**

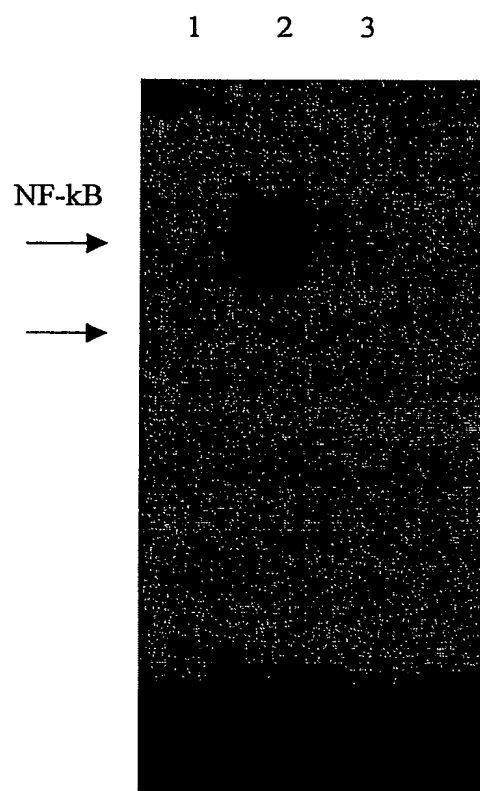


**Fig. 12.4: Effect of HyPE on LPS-induced ICAM-1 and E-selectin expression.**

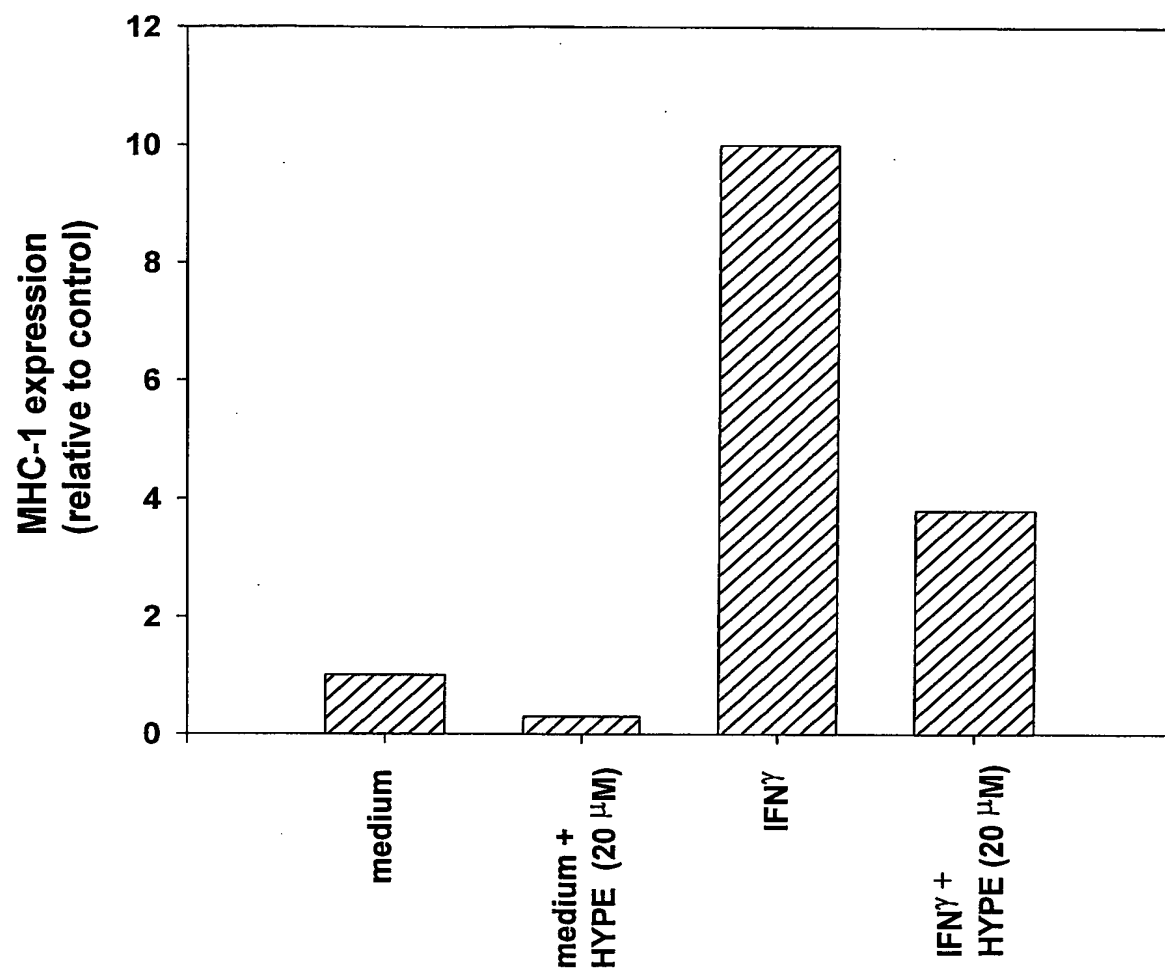




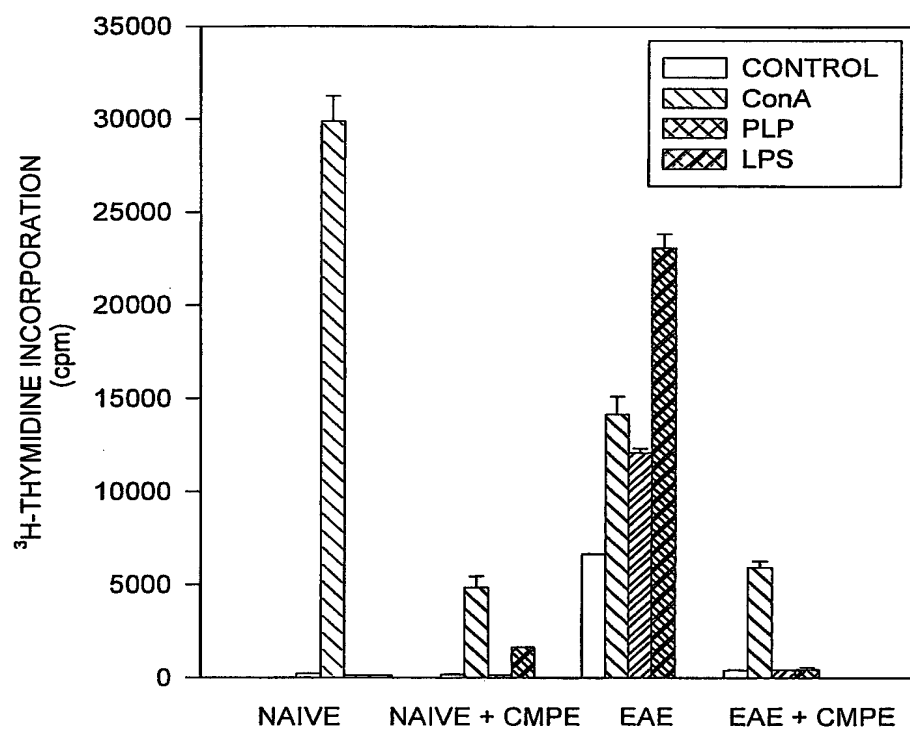
**Fig. 12.5: Effect of HyPE on LPS-induced activation of NF- $\kappa$ B in LMVEC.**



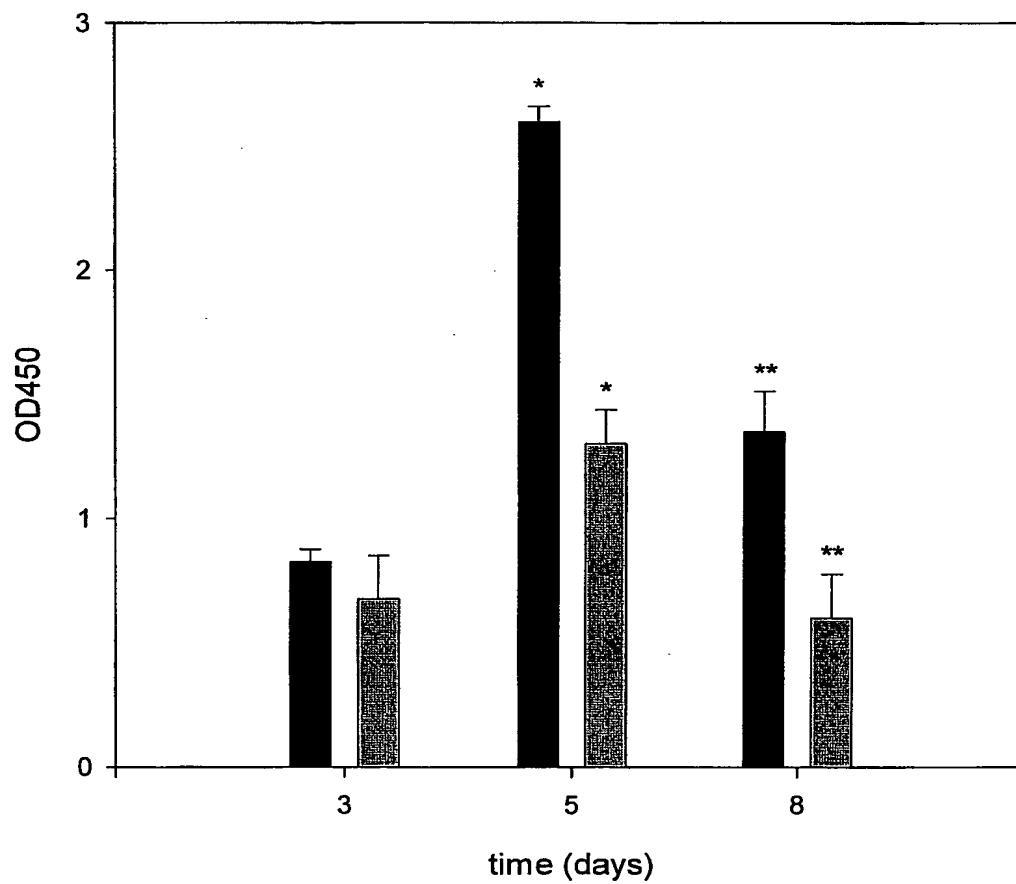
**Fig. 13.1: Inhibition of MHC-1 expression by TNF- $\gamma$  stimulated human umbilical vein endothelial cells (HUVEC) by HyPE.**



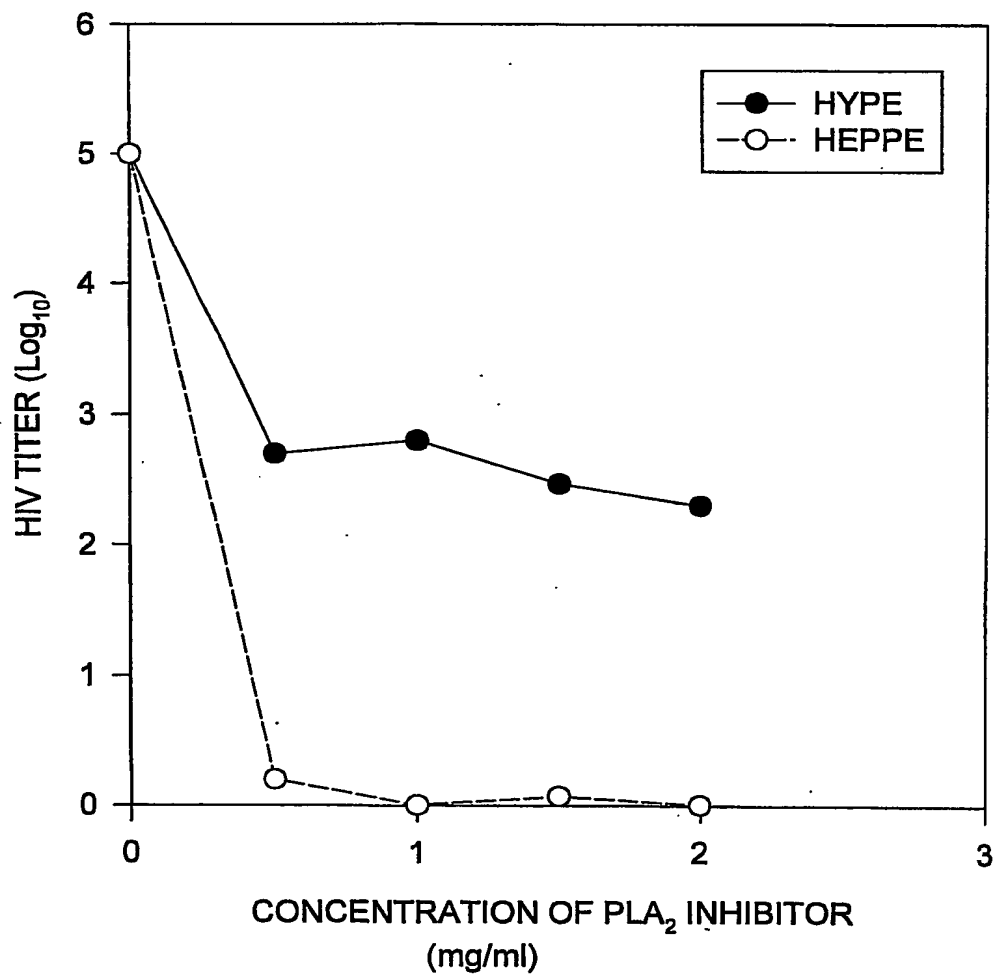
**Fig. 13.2: CMPE inhibits the proliferation of lymphocytes in vitro.**



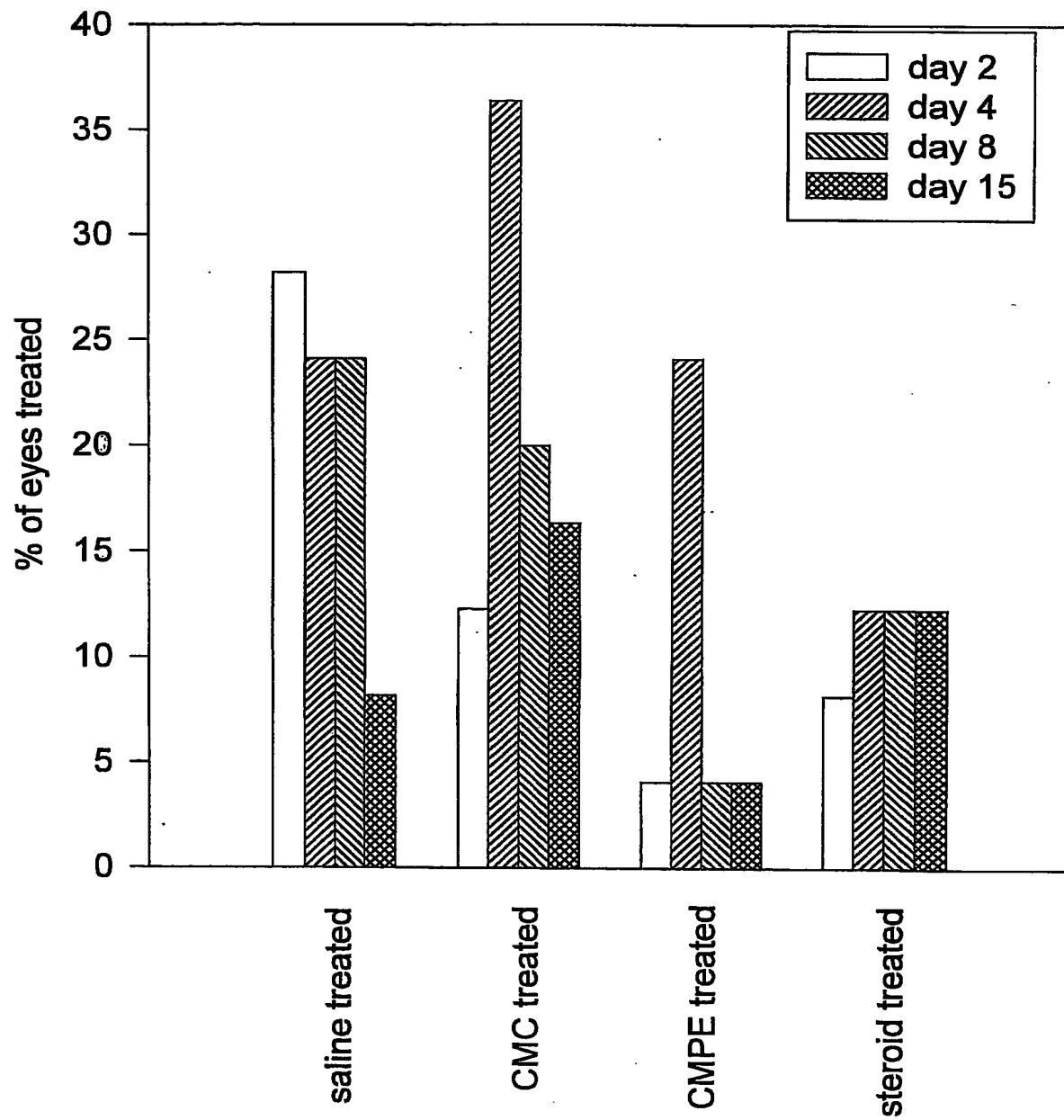
**Fig. 13.3: Inhibition of MLR-induced proliferation of lymphocyte by HyPE.**



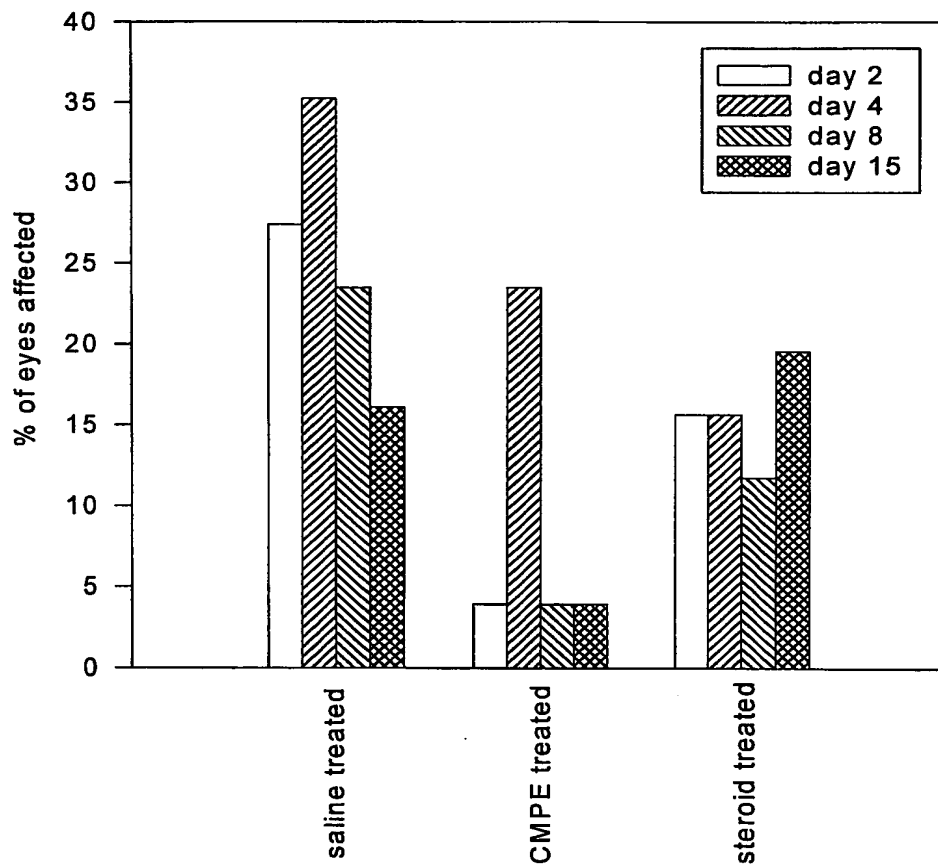
**Fig. 14.1: Effect of Lipid-conjugates on HIV infectivity.**



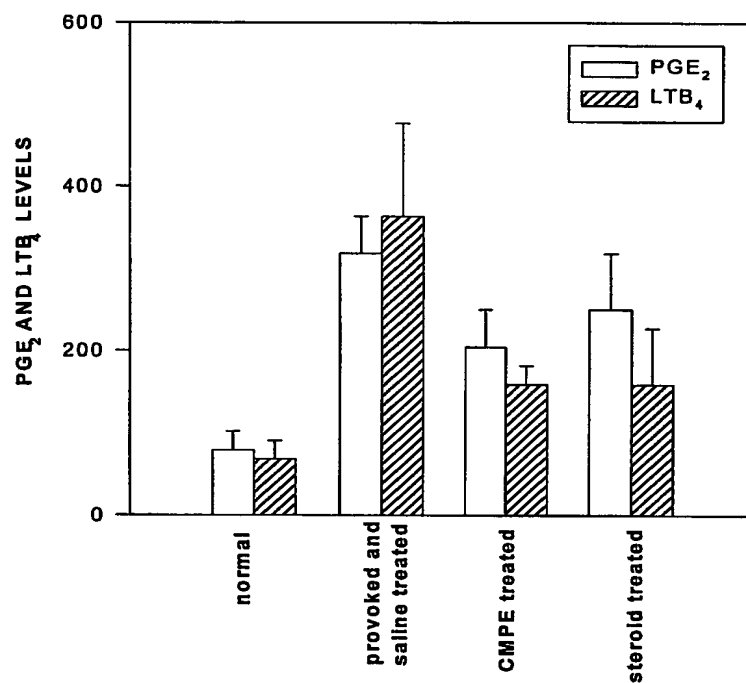
**Fig. 15.1: Effect of CMPE on allergic conjunctivitis in guinea pigs.  
Corneal opacities at the immediate post-provocation phase.**



**Fig. 15.2: Effect of CMPE on allergic conjunctivitis in guinea pigs.  
Corneal opacities at the late post-provocation phase.**

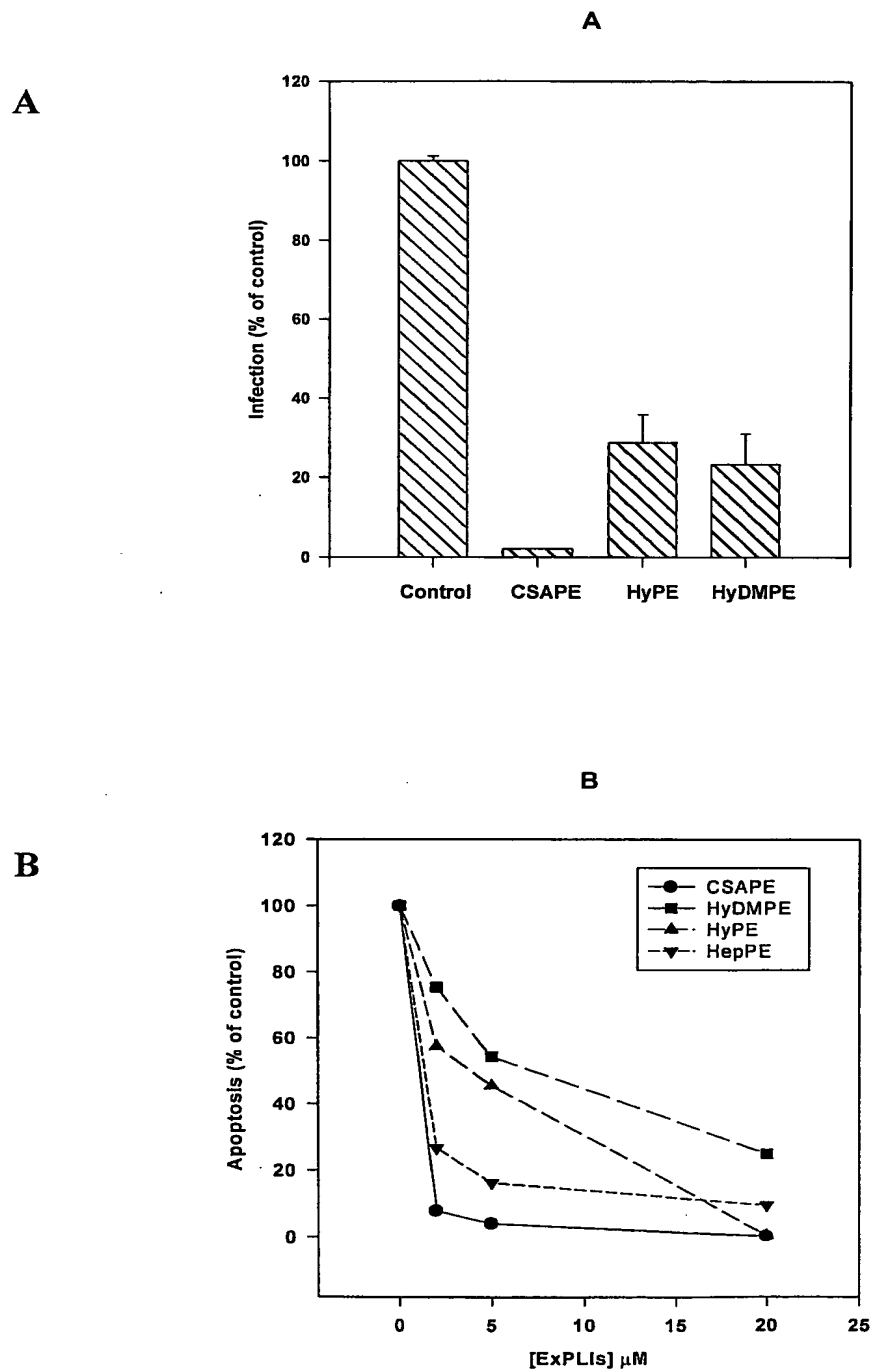


**Fig. 15.3: Effect of CMPE on prostaglandin E<sub>2</sub> (PGE<sub>2</sub>) and leukotriene B<sub>4</sub> (LTB<sub>4</sub>) levels in the cornea of guinea pigs with allergic conjunctivitis.**





**Fig. 16.1: Effect of Lipid-conjugates on injection of HeLa cells by chlamydia.**



**Fig. 16.2: Effect of ExPLIs on *CHLAMYDIA*-induced apoptosis of HeLa cells.**

